Review of the Pterophoridae from New Guinea, with descriptions of eight new species (Lepidoptera)

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Gielis, C. Review of the Pterophoridae from New Guinea, with descriptions of eight new species (Lepidoptera).
Zool. Med. Leiden 77 (21), 30.xii.2003: 349-391, figs 1-119.— ISSN 0024-0672.
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Key words: Lepidoptera; Pterophoridae; New Guinea; Papua New Guinea; Irian Jaya; new species; synonyms; review.
A review is given of the plume moths (Pterophoridae) from New Guinea with a checklist and notes on the known species. Newly recognized synonyms are: *Deuterocopus torridus* Meyrick, 1913, is a junior synonym of *Deuterocopus planeta* Meyrick, 1912; *Platyptilia teleacma* Meyrick, 1932, is a junior synonym of *Lantanophaga pusillidactyla* (Walker, 1864), and *Aciptilia denticulata* Yano, 1963, is a junior synonym of *Pterophorus niveus* (Snellen, 1903). Eight new species are described: *Deuterocopus devosi* spec. nov., *Nippoptilia rutteni* spec. nov., *Megalorhipida deboeri* spec.nov., *Hellinsia wamenae* spec. nov., *H. tariensis* spec. nov., *H. agassizi* spec. nov., *H. kaiapensis* spec. nov. and *H. carphodactoides* spec. nov.

Introduction

For this review the Pterophoridae of the Bishop Museum, Honolulu, Hawaií (BPBM; mainly from Wau, Papua New Guinea), of the Zoological Museum of Amsterdam, The Netherlands (ZMA; from western New Guinea: Irian Jaya: Wamena, Andai, Waena, Centani, Tandia, Manokwari, Gunung Bembab, Jiwika), and the Zoologisk Museum, University of Copenhagen, Denmark (ZMUC) are studied; the latter material has been collected by Dr David Agassiz during an expedition in Papaua New Guinea (Madang, Tari, Kaiap near Wabag). The material has been compared with type specimens in the collections of the British Natural History Museum (BMNH), the Natural History Museum in Paris (MNHN), the United States National Museum/Smithsonian Institute, Washington (USNM) and the National Natural History Museum in Leiden (RMNH).

In this paper the available information on the Pterophoridae fauna of New Guinea is summarized. Although recent developments have improved the accessibility of the interior areas of New Guinea to some extent, from most areas it is still difficult to obtain specimens.

Except for the major publication by Diakonoff (1952-1955) on the western central part of the island, and Yano (1963) no reviews on the fauna of Pterophoridae have been published. Merely a generic review on the genus *Ochyrotica* Walsingham (Arenberger & Gielis, 1988) and scattered descriptions of single species have been published. A comprehensive reference list is produced at the end of this publication. As a result 41 species had been recognized from the island so far. The lack of knowledge and publications is largely due to the limited number of specimens collected. Although the collecting in the 1990s did not result in a large number of specimens of Pterophoridae, a substantial growth of our knowledge has been obtained.

It is tempting to include neighbouring islands and island groups in the present review, but I refrained from this to avoid complications, and restricted myself to the island of New Guinea itself. I am aware of the presence of more unidentified Pterophoridae from New Guinea in the collections of major museums. However, this publication has to be considered as an update of our present knowledge and not as a revision. It will facilitate future work by providing an illustrated review of the current knowledge.

At present the fauna of Australia has approximately the same number of known species of Pterophoridae as New Guinea. However, the relative number of endemics differs considerably and only some cosmopolitan species and species with a regionally wider distribution tend to occur in both faunas, whereas the mayority does not show any overlap in distribution.

Checklist of Pterophoridae from New Guinea, with type localities and synonyms

Ochyrotica cretosa (Durrant, 1916) (*Steganodactyla*). Indonesia, Irian Jaya.
O. buergersi Gaede, 1916. Indonesia, Irian Jaya.
O. breviapex Gielis, 1990. Indonesia, Irian Jaya.
O. salomonica Arenberger, 1991. Solomon Islands.
O. pseudocretosa Gielis, 1990. Indonesia, Irian Jaya.
O. toxopeusi Gielis, 1988. Indonesia, Sulawesi.
O. misoolica Gielis, 1988. Indonesia, Misool.
Hexadactilia trilobata Fletcher, 1910. Papua New Guinea.
Deuterocopus issikii Yano, 1963. Indonesia, Irian Jaya.
D. devosi **spec. nov.** Indonesia, Irian Jaya.
D. planeta Meyrick, 1908. India.
D. torridus Meyrick, 1913. Indonesia, Irian Jaya/Kei Island. **Syn. nov.**
Tetraschalis lemurodes Meyrick, 1908. Indonesia, Kei Island.
Fletcherella niphadothysana Diakonoff, 1952. Indonesia, Irian Jaya.
Platyptilia petila Yano, 1963. Solomon Islands.
P. phanerozona Diakonoff, 1952. Indonesia, Irian Jaya.
P. archimedon Meyrick, 1938. Papua New Guinea.
P. enargota Durrant, 1915. Indonesia, Irian Jaya.
P. monotrigona Diakonoff, 1952. Indonesia, Irian Jaya.
Stenoptilodes taprobanes (Felder & Rogenhofer, 1875) (*Platyptilia*). Sri Lanka.
Platyptilia brachymorpha Meyrick, 1888. India.
Platyptilia seeboldi Hofmann, 1898. Syria.
Platyptilia terlizzii Turati, 1926. Libya.
Amblyptilia zavatterii Hartig, 1953. Italy.
Platyptilia legrandi Bigot, 1962. Seychelles.
Lantanophaga pusillidactyla (Walker, 1864) (*Oxyptilus*). Jamaica.
Platyptilia technidion Zeller, 1877. Virgin Is. (St. Thomas).
Platyptilia hemimetra Meyrick, 1886. Réunion Isl.
Platyptilia lantana Busck, 1914. Hawai'i Is.
Platyptilia lantanadactyla Amsel, 1951. Morocco.
Platyptilia teleacma Meyrick, 1932. Indonesia, Java. **Syn. nov.**

Xyroptila marmarias Meyrick, 1908. Australia.
Amblyptilia galactostacta (Diakonoff, 1952) (*Stenoptilia*). Indonesia, Irian Jaya.
A. iriana (Diakonoff, 1952) (*Stenoptilia*). Indonesia, Irian Jaya.
Nippoptilia rutteni **spec. nov.** Indonesia, Irian Jaya.
Nippoptilia spinosa Yano, 1963. Indonesia, Irian Jaya.
Sphenarches anisodactyla (Walker, 1864) (*Oxyptilus*) Sri Lanka.
Sphenarches caffer; Fletcher, 1909 (not Zeller, 1852). Rep. S. Africa.
Pterophorus diffusalis Walker, 1864. Australia.
Oxyptilus direptalis Walker, 1864 [part]. Zaire.
Sphenarches synophrys Meyrick, 1886. New Hebrides/Tonga.
Alucita vilis; Matsumura, 1905 (not Butler, 1881). Japan.
Sphenarches chroesus Strand, 1913. Cameroun.
Pselnophorus dolichos Matsumura, 1931. Japan.
Megalorhipida rishwani Makhan, 1994. Surinam.
Exelastis pumilio (Zeller, 1873) (*Mimeseoptilia*). USA (Texas).
Marasmarcha liophanes Meyrick, 1886. Réunion Isl.
Mimaesoptilus gilvidorsis Hedemann, 1896 (not Zeller, 1877). Virgin Is., St. Croix.
Stangeia xerodes (Meyrick, 1886) (*Trichoptilus*). Australia.
Trichoptilus esakii Hori, 1936. Ryu Kyu Is.
Trichoptilus dryites Meyrick, 1936. Indonesia, Java.
Megalorhipida leucodactyla (Fabricius, 1793) (*Pterophorus*). Virgin Islands.
Pterophorus defectalis Walker, 1864. Sierra Leone.
Pterophorus congrualis Walker, 1864. N India.
Pterophorus oxydactyla Walker, 1864. Sri Lanka.
Aciptilia hawaiiensis Butler, 1881. Hawaii.
Trichoptilus ochrodactyla Fish, 1881. USA (Texas).
Trichoptilus centetes Meyrick, 1886. Papua New Guinea.
Trichoptilus compsochares Meyrick, 1886. Cape Verde Is.
Trichoptilus adelphodes Meyrick, 1887. Australia.
Trichoptilus ralumensis Pagenstecher, 1900. Bismarck Is.
Trichoptilus derelictus Meyrick, 1926. Galapagos Is.
Megalorhipida palaestinensis Amsel, 1935. Israel.
Megalorhipida palästinensis Amsel, 1935, incorr. spell.
M. deboeri **spec. nov.** Indonesia, Irian Jaya.
Hellinsia iraneaus (Diakonoff, 1952) (*Oidaematophorus*). Indonesia, Irian Jaya.
H. wamenae **spec. nov**. Indonesia, Irian Jaya.
H. tariensis **spec. nov.** Papua New Guinea.
H. agassizi **spec. nov.** Papua New Guinea.
H. kaiapensis **spec. nov.** Papua New Guinea.
H. carphodactoides **spec. nov.** Papua New Guinea.
H. mesoleucus (Diakonoff, 1952) (*Oidaematophorus*). Indonesia, Irian Jaya.
H. probatus (Meyrick, 1938) (*Pterophorus*). Papua New Guinea.
Adaina microdactyla (Hübner, [1813]) (*Alucita*). Europe.
Pterophorus carphodactylus Stephens, 1834. England.
Adaina montivola Meyrick, 1928. China.

Adaina subflavescens Meyrick, 1930. Indonesia, Sumatra.
Pterophorus leucadactylus (Walker, 1864) (*Aciptilus*). Sri Lanka.
P. niveus (Snellen, 1903) (*Aciptilia*). Indonesia, Java.
Aciptilia denticulata Yano, 1963. Indonesia, Irian Jaya. **Syn. nov.**
P. aliubasignum Gielis, 2000. Indonesia, Irian Jaya.
P. lacteipennis (Walker, 1864) (*Aciptilus*). India.
P. ebbei Arenberger, 1989. Papua New Guinea.
P. albidus (Zeller, 1852) (*Aciptilia*). Southern Africa.
Alucita endogramma Meyrick, 1922. Fiji.
Alucita endophaea Meyrick, 1930. Mozambique.
Aciptilia suffiata Yano, 1963. Japan, Okinawa.
Diacrotricha guttuligera Diakonoff, 1952. Indonesia, Irian Jaya.
Cosmoclostis hemiadelpha Fletcher, 1947. Australia.
Cosmoclostis lamprosema Fletcher, 1947. Bismarck Islands.
Cosmoclostis pesseuta Meyrick, 1906. Sri Lanka.
Cosmoclostis premnicola Fletcher, 1932. India.

Material and comments

Ochyrotica cretosa (Durrant, 1916)
(figs 1, 46, 86)

The species has been described from Mimika R(iver). Also recorded from the Moluccas: Halmahera and Solomon Islands.

Remarks.— The specimens mentioned by Yano (1963) need genital examination. The external resemblance makes confusion of this species with *O. pseudocretosa* possible.

Ochyrotica buergersi Gaede, 1916
(figs 2, 47, 87)

The species has been described from Malu. The species is now known from: Nabire S of Geelvink Bay (BPBM), Biak (BPBM), Lau (BPBM), Wareng (USNM), Sogiri Plateau (RMNH), Kota Nica nr Hollandia (RMNH), and Waena (ZMA). Also found on the islands New Britain and Santa Isabel.

Ochyrotica breviapex Gielis, 1990
(figs 3, 48, 88)

The holotype of this species is collected in Wau. Paratypes are from the Baliem Valley and from Borneo. Additional material seen from Mendi and Tari (ZMUC). In the Philippines it occurs on the islands Misamis and Mindanao.

Remarks.— The specimens of *Ochyrotica concursa* (Walsingham), mentioned by Yano (1963), are probably the present species. The only confirmed specimens of *O. concursa* originate from Sri Lanka.

Ochyrotica salomonica Arenberger, 1991
(figs 49, 89)

This species has been described from the Solomon Islands: Kolombangara Island, Santa Ysabel, San Cristobal and New Guinea: Sarmi. Recently examined material comes from New Guinea: Madang (ZMUC, CG).

Ochyrotica pseudocretosa Gielis, 1990
(figs 4, 50, 90)

This species is only known from the type-series, collected in Sorong and Kampaur and from the island of Ternate (Moluccas).

Ochyrotica toxopeusi Gielis, 1988
(figs 5, 51, 91)

The species has been described from the island Celebes (Sulawesi). A single female specimen has been collected at Nabire, S of Geelvink Bay (BPBM).

Ochyrotica misoolica Gielis, 1988
(figs 6, 52, 92)

Described from the island of Misool (Moluccas); a single specimen has been collected at Andai on the Birdhead Peninsula (ZMA).

Hexadactilia trilobata Fletcher, 1910
(figs 7, 53)

The type-specimens originate from Ron and the Humboldt Bay (= Teluk Humboldt). Two additional specimens were collected in a malaise trap near Moresby and at Cape Rodney (Yano, 1963).

Deuterocopus issikii Yano, 1963
(figs 8, 54)

The species is only known from the type-specimens from Andai and Manokwari.

Deuterocopus devosi spec. nov.
(figs 9, 55, 93)

Material.— Holotype ♂ (ZMA), "Indonesia, Irian Jaya, Birdhead Peninsula, Manokwari, Gunung Meja Reserve, 2.xi.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4667". Paratype ♀ (RMNH), "Indonesia, Irian Jaya, Araucaria Camp, 800 m, 17.iii.1939 (L.J. Toxopeus), gent. CG 4777". The paratype has been identifed as: *Deuterocopus famulus* Meyrick (Diakonoff, 1952: 12).

Diagnosis.— The species is characterized by the depth of the clefts in the forewing, and the male genital structure.

Description.— Male. Wingspan 10 mm. Head appressedly scaled, ferrugineous brown. Collar with numerous erect, bifid scales, ferrugineous brown. Palps ferrugineous brown, with a whitish ring at base of second segment and in middle of second and third segments, curved up, twice diameter of eye. Antennae shortly ciliated, ringed dark brown and ochreous. Thorax and tegulae ferrugineous brown. Mesothorax ferrugineous, turning white. Hind leg ferrugineous-white, with four scale-bristles: between proximal end of tibia and base of first pair of spurs a ferriginous-ochreous bristle, ferrugineous bristles at base of both pairs of spurs and at end of tibia. Pairs of spurs of unequal length, distal pair longer than proximal pair.

Forewing cleft twice, costal cleft from 1/2, and dorsal cleft 3/4th of costal cleft; ferrugineous. Markings dark brown: with a small discal spot, a poorly developed spot at base of first cleft, dark patches in first lobe at one third and terminal, gradually darkening towards termen of second and third lobes. Fringe at termen of first lobe whitish with basally black scales, at dorsum dark brown; second lobe at costa and dorsum dark brown and at termen with a white dash; third lobe at costa dark brown, at apex and anal region whitish, between white patches and at dorsum blackish, and at dorsum of uncleft part of wing whitish with a small black interruption. Underside black-brown, along costa with some ochreous patches.

Hindwing and fringe ferrugineous. Third lobe with a large black terminal scale tooth along costa and dorsum, and a smaller one at middle of dorsum, and with some dark scales at 3/4th of costa. Underside ferrugineous. Venous scales bright ferrugineous, in a double row.

Male genitalia.— Valves symmetrical, basally trapezoid, subterminally with a curved saccular process as long as basal part of valves, and a large outward curved process, one and a half times basal part of valve. This part is basally wide and gradually tappering towards tip; basal parts covered with large spiculae. Tegumen bilobed, indented to half of its length. Uncus from basal one-third, not reaching tip of tegumen, bifid. Saccus narrow and slender. Aedeagus moderately long, with two twists. No cornutus.

Female genitalia.— Antrum funnel shaped, twice wider than high. Ductus bursae slender. Bursa copulatrix vesicular, with a pair of signa. Signa in shape of a double sclerotized plate, centrally, and facing parts heavier sclerotized and with a thorn like protrusion. Apophyses posteriores twice as long as papillae anales. Apophyses anteriores blunt and part of pronounced lamina ante-vaginalis.

Ecology.— The moth flies in March and November. The hostplant is unknown.

Distribution.— Indonesia: Irian Jaya, Manokwari, Araucaria Camp (Baliem Valley).

Etymology.— The species is named after one of its collectors and a very active microlepidopterist: Mr R. de Vos.

Remarks.— The species has been compared with known species from the region. It differs with all in the relation of the depth of the clefts and the white spots on the forewing.

Deuterocopus planeta Meyrick, 1908
(figs 56, 94)

This species has been described from India. It occurs throughout south-east Asia and the Indonesian Archipelago. The type locality of its new synonym *D. torridus*

Meyrick, 1913, is Little Kei island. No additional specimens are found.

Remarks.— After comparing the genital structure of the types of *D. planeta* Meyrick, 1912 and *D. torridus* Meyrick, 1913, these turned out to be identical, and the species are synonymized (**syn. nov.**).

Tetraschalis lemurodes Meyrick, 1908
(figs 10, 57)

The type specimen orginate from Little Kei Island. Further known from along the southeast coast near Moresby and at Cape Rodney, collected in a malaise trap (Yano, 1963).

Fletcherella niphadothysana Diakonoff, 1952
(figs 11, 58, 95)

Diakonoff (1952) described the species from the Baliem Valley. Further it has been collected at Sorong (RMNH) and Wndesi-Majoni (Yano, 1963). The species is also recorded from islands in the Indonesian and Philippine archipelago.

Platyptilia petila Yano, 1963
(figs 59, 96)

The species has been described from the Solomon Islands. Yano (1963) also mentions Swart Valley: Karubaka, Minj area, and Sepik. Other specimens have been examined from Tari (ZMUC) and Sorong (RMNH)

Platyptilia phanerozona Diakonoff, 1952
(figs 12, 97)

This species is known only from the holotype, which has been collected at Lake Habbema.

Platyptilia archimedon Meyrick, 1938
(fig. 13)

This species is also only known from the holotype, collected at Mafulu.

Platyptilia enargota Durrant, 1915
(figs 14, 98)

This species is known from the holotype, collected at the Wataikwa River. In the RMNH collection is present one specimen from Borneo.

Platyptilia monotrigona Diakonoff, 1952
(fig. 15)

The holotype is collected near Lake Habbema. No other specimens are known. The

recognition of this species is difficult, since the distal half of the abdomen is missing and no genital structures are known.

Stenoptilodes taprobanes (Felder & Rogenhofer, 1875)
(figs 16, 60, 99)

This species has a pantropical distribution, and extends into subtropical areas. On New Guinea collected at Wamena (ZMA). Yano (1963) mentions the Minj area and Moresby.

Lantanophaga pusillidactyla (Walker, 1864)
(figs 17, 61, 100)

A species with a pantropical distribution. The hostplant, *Lantana*, is used as an ornamental. This has contributed to the recent extension of its distribution into the temperate areas. In New Guinea collected at Wamena (ZMA). The examination of the type-series of *Platyptilia teleacma* Meyrick, 1932, has revealed the synonymity with the present species (**syn. nov.**).

Xyroptila marmarias Meyrick, 1908
(figs 18, 62, 101)

Described from Australia; the species is mentioned by Yano (1963) from Manokwari and Windesi-Majosi.

Amblyptilia galactostacta (Diakonoff, 1952)
(figs 19, 63)

The species is only known from the type-series, collected in the Scree Valley and near Lake Habbema.

Amblyptilia iriana (Diakonoff, 1952)
(figs 20, 64)

The species is only known from the type-series, collected in the Scree Valley.

Nippoptilia rutteni spec. nov.
(figs 21, 65)

Material.— Holotype ♂ (ZMA), "Indonesia, Irian Jaya, Birdshead Peninsula, Gunung Bembab, 15 km N Ransiki, 350 m, 1°26'S 134°11'E, 2.iii.1996 (ZMA-exp.), gent. CG 4669".

Diagnosis.— The species is characterized by the shape of the male genitalia.

Description.— Male. Wingspan 13 mm. Head appressedly scaled, dark brown. Collar dark brown with some erect, bifid scales. Palps dark brown, with white tip of third segment, protruding, one and one third times diameter of eye, slender. Anten-

Etymology.— The species is named after Dr A.L.M. Rutten, a microlepidopterist participating in the ZMA expeditions to New Guinea.

Remarks.— The generic position of this species is not certain. The imago and the general pattern of the male genitalia apply to the genus *Nippoptilia* Yano, but the unfamiliar spiculation on the tip of the valve causes reason to doubt. With the collecting of more material and among it a female this problem may be solved.

Nippoptilia spinosa Yano, 1963
(figs 22, 66)

A species only known from the type series, collected in Wareng and Manokwari.

Sphenarches anisodactyla (Walker, 1864)
(figs 23, 67, 102)

The species has a circumtropical distribution. On New Guinea found at Tari (ZMUC) and Wamena (ZMA). Yano (1963) also mentions Wareng, Kebar Valley W of Manokwari, Brown River, and Cape Rodney.

Exelastis pumilio (Zeller, 1873)
(figs 24, 68, 103)

This species is widely distributed in tropical areas. In the Americas it extends into the temperate zones. Examined from Santani in the Cyclops Mountains (ZMA). Yano (1963) mentions Mendi and Wau.

Stangeia xerodes (Meyrick, 1886)
(figs 25, 69, 104)

The species is widely distributed in the Indo-Australian fauna. On New Guinea collected in Wamena (ZMA).

Megalorhipida leucodactyla (Fabricius, 1793)
(figs 26, 70, 105)

A species with a circumtropical distribution. A synonym, *Trichoptilus centetes* Meyrick, 1886, has been described from Papua New Guinea. Recent specimens were collected at Wau (BPBM), Tari (ZMUC) and Wamena (ZMA). Yano (1963) mentions Aroa Estate, W of Redscar Bay.

Megalorhipida deboeri spec. nov.
(figs 27, 71)

Material.— Holotype ♂ (ZMA), "Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 24.x.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4388".

Diagnosis.— The species is characterized by the pointed tip of the valves of the male genitalia.

Description.— Male. Wingspan 10 mm. Head appressedly scaled, pale grey-brown. Collar with some erect, bifid scales. Palps brown-grey, as long as diameter of eye. Antennae shortly ciliated, longitudinally lined: dark brown and ochreous-white. Thorax, tegulae and mesothorax brown-grey.

Forewing cleft from 1/3rd, brown-ochreous. Markings ochreous-brown, a patch before and at the base of the cleft, transverse patches at 1/3rd and 2/3rd of first lobe and centrally in second lobe. Fringe ochreous; two dark brown fringe groups at costa of first lobe at 1/2 and 3/4th and at dorsum at 5/6th, brown fringe at dorsum between the dark patch and base of the cleft; a dark brown patch at apex and anal angle of second lobe and two pale brown patches before anal angle. In fringe scattered white and dark brown scales. Underside pale brown, gradually turning white towards apices.

Hingwing and fringe grey-brown. A dark brown scale bristle at costa and dorsum of third lobe at 2/3rd, followed by scattered scales and a small bristle at apex. Underside brown-grey. Venous scales ferrugineous, in a double row of equal length.

Male genitalia.— Valves symmetrical, with parallel margins, gradually curved outwards, ending in a pointed tip. Tegumen vesicular, simple. Uncus in middle of tegumen, shaped like a flattened plate. Anellus arms short and stout. Saccus broad and wide, with arched shape. Aedeagus narrow, straight. Tip of aedeagus narrowing and hooked. No cornutus.

Female genitalia.— Unknown.

Ecology.— The moth flies in October at an altitude of 1500 meter. The hostplant is unknown.

Distribution.— Indonesia: Irian Jaya, Baliem Valley.

Etymology.— The species is named after one of its collectors and entomologist, Mr A.L. de Boer, (Zoological Museum, University of Amsterdam).

Hellinsia iraneaus (Diakonoff, 1952)
(figs 28, 72)

This species is only known from the holotype, collected at Sigi Camp in the Baliem Valley.

Hellinsia wamenae spec. nov.
(figs 29, 73)

Material.— Holotype ♂ (ZMA), "Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 17.x.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4387". Paratype ♂ (CG), "Indonesia, Irian Jaya, Baliem Valley, Jiwika, 1600 m, 21.x.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4670".

Diagnosis.— The species resembles very much *Hellinsia iraneaus* (Diakonoff), but differs in having the costal spot in the first lobe of the forewing almost obsolete and the saccular and cucullar processes in the male genitalia differently shaped.

Description.— Male. Wingspan 16-18 mm. Head appressedly scaled, ochreous. Collar ferrugineous -ochreous. Palps ferrugineous-ochreous, protruding, as long as diameter of eye. Antennae pectinate, faintly ringed, ochreous-brown and pale brown. Thorax, tegulae, mesothorax and abdomen ochreous. Hind leg ochreous, with two pairs of spurs of equal length.

Fig. 1. *Ochyrotica cretosa* (Durrant, 1916). Holotype. Indonesia, Irian Jaya, Mimika River, viii.1910 (A.F.R. Wollaston), gent. BM 17991 (BMNH).

Fig. 2. *O. buergersi* Gaede, 1916. Indonesia, Irian Jaya, Wareng, 17.viii.1936 (S. Issiki), gent. CG 1949 (USNM).

Fig. 3. *O. breviapex* Gielis, 1990. Holotype. Papua New Guinea, NE Wau, Morobe District, 1200 m, 29-30.i.1967 (R. Straatman), malaise trap, gent. CG 3004 (RMNH).

Fig. 4. *O. pseudocretosa* Gielis, 1990. Holotype. Indonesia, Irian Jaya, Sorong, 28.viii-6.ix.1948 (M.A. Lieftinck), gent. CG 3037 (RMNH).

Fig. 5. *O. toxopeusi* Gielis, 1988. Holotype. Indonesia, Celebes, Nungo, Watampone, 800 m, 22.vi. 1936 (L.J. Toxopeus), gent. CG 3005 (RMNH).

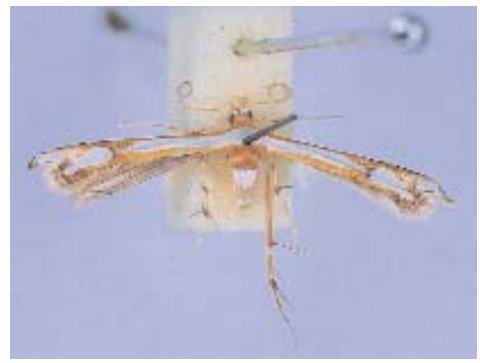

Fig. 6. *O. misoolica* Gielis, 1988.Paratype. Indonesia, Misool, Fakal, 0-75 m, 8.ix-20.x.1948 (M.A. Lieftinck), gent. CG 3002 (RMNH)

Fig. 7. *Hexadactilia trilobata* Fletcher, 1910. Holotype. Papua New Guinea, Ron, vii.1897 (Doherty), prep. BM, 20530 (BMNH).

Fig. 8. *Deuterocopus issikii* Yano, 1963. Holotype. Indonesia, Irian Jaya, Andai, 1.vi.1936 (S. Issiki) (USNM).

Fig. 9. *D. devosi* spec. nov. Holotype. Indonesia, Irian Jaya, Birdhead Peninsula, Manokwari, Gunung Meja Reserve, 2.xi.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4667 (ZMA).

Fig. 10. *Tetraschalis lemurodes* Meyrick, 1908. Type. Papua New Guinea, Ron, vii.1897 (BMNH).

Fig. 11. *Fletcherella niphadothysana* Diakonoff, 1952. Holotype. Indonesia, Irian Jaya, Araucaria Camp, 800 m, 28.iii.1939 (L.J. Toxopeus), gent. Diakonoff 906/ 906A (RMNH).

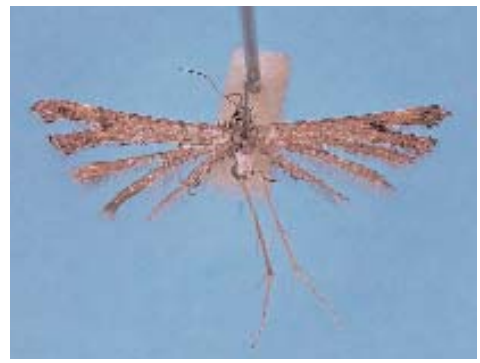

Fig. 12. *Platyptilia phanerozona* Diakonoff, 1952. Holotype. Indonesia, Irian Jaya, Lake Habbema, 3250-3300 m, 5.viii.1938 (LJ Toxopeus), gent. Diakonoff 1040 (RMNH).

Fig. 13. *P. archimedon* Meyrick, 1938. Holotype. Papua New Guinea, Mafulu, 4000', i.1934 (L.E. Cheesman) (BMNH).

Fig. 14. *P. enargota* Durrant, 1915. Holotype. Indonesia, Irian Jaya, Wataikwa river, viii.1910 (BMNH).

Fig. 15. *P. monotrigona* Diakonoff, 1952. Holotype. Indonesia, Irian Jaya, Moss Forest Camp, 5 km NE Lake Habbema, 2800 m, 16.x.1938 (L.J. Toxopeus) (RMNH).

Fig. 16. *Stenoptilodes taprobanes* (Felder & Rogenhofer, 1875). Spain, Cadiz, San Roque, 29.ix.1983 (CG), gent. CG 1554 (CG).

Fig. 17. *Lantanophaga pusillidactyla* (Walker, 1864). Holotype of *Platyptilia lantanadactyla* Amsel. Morocco, Rabat, Å *Lantana* flowers, 12.xii.1949 (H.G. Amsel) (MNHN).

Fig. 18. *Xyroptila marmarias* Meyrick, 1908. Syntype. Australia, Queensland, Cairns, x.1906 (Doherty) (BMNH).

Fig. 19. *Amblyptilia galactostacta* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Letterbox Camp, 3600 m, 5.ix.1938 (L.J. Toxopeus), gent. Diakonoff 1037 (RMNH).

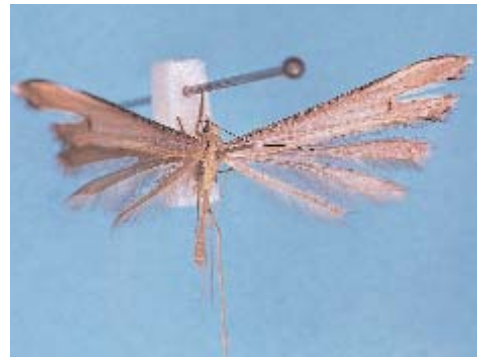

Fig. 20. *A. iriana* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Scree Valley Camp, 3800 m, 20.ix.1938 (L.J. Toxopeus), gent. Diakonoff 1036 (RMNH).

Fig. 21. *Nippoptilia rutteni* spec. nov. Holotype. Indonesia, Irian Jaya, Birdshead Peninsula, Gunung Bembab, 15 km N Ransiki, 350 m, 1°26'S 134°11'E, 2.iii.1996 (ZMA-exp), gent. CG 4669 (ZMA).

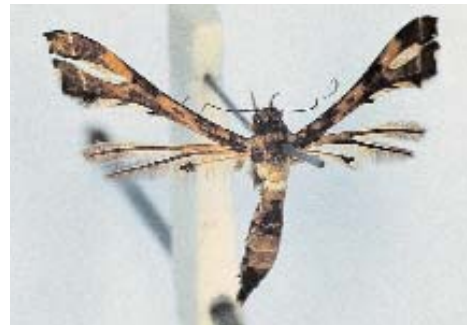

Fig. 22. *N. spinosa* Yano, 1963. Holotype. Indonesia, Irian Jaya, Wareng, 21.v.1936 (S. Issiki) (USNM).

Fig. 23. *Sphenarches anisodactyla* (Walker, 1864). Tanzania, Arumeru, Usa river, 1170 m, 14.vii.1991 (L Aarvik) (CG).

Fig. 24. *Exelastis pumilio* (Zeller, 1873). Argentina, Tucuman, Alto de S Agustin, 1020 m, 2.ii.1996 (NEENA) (CG).

Fig. 25. *Stangeia xerodes* (Meyrick, 1886). Lectotype. Australia, Queensland, Toowoomba, 25.ix. 1879, gent. BM 11484 (BMNH).

Fig. 26. *Megalorhipida leucodactyla* (Fabricius, 1793). Tchad, Bebedja, 395 m, 24.vii.1973 (F. Bink) (CG).

Fig. 27. *M. deboeri* spec. nov. Holotype. Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 24.x.1993 (A..J de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4388 (ZMA).

Fig. 28. *Hellinsia iraneaus* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Sigi Camp, 1500 m, 26.ii.1939 (L.J. Toxopeus), gent. Diakonoff 1041 (RMNH).

Fig. 29. *H. wamenae* spec. nov. Holotype. Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 17.x.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4387 (ZMA).

Fig. 30. *H. tariensis* spec. nov. Holotype. Papua New Guinea, Southern Highlands, Tari, 5000', 19.xi.1984 (D Agassiz), gent. CG 4606 (ZMUC).

Fig. 31. *H. agassizi* spec. nov. Holotype. Papua New Guinea, Enga, Wabag, Kaiap, 9000', 9.xi.1984 (D. Agassiz), gent. CG 4609 (ZMUC).

Fig. 32. *H. kaiapensis* spec. nov. Holotype. Papua New Guinea, Enga, Wabag, Kaiap, 9000', 9.xi.1984 (D. Agassiz), gent. CG 4610 (ZMUC).

Fig. 33. *H. carphodactoides* spec. nov. Holotype. Papua New Guinea, Southern Highlands, Tari, 5000', 19.xi.1984 (D. Agassiz), gent. CG 4611 (ZMUC).

Fig. 34. *H. mesoleucus* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Lake Habbema, 3250-3300 m, 1.viii.1938 (L.J. Toxopeus), gent. Diakonoff 1038 (RMNH).

Fig. 35. *H. probatus* (Meyrick, 1938). Holotype. Papua New Guinea, Mt Tafa, 8500', iii.1934 (L.E. Cheesman), gent. BM 21323 (BMNH).

Fig. 36. *Adaina microdactyla* (Hübner, [1813]). Netherlands, Noord-Brabant, Etten Leur, 23.v. 1979 (CG) (CG).

Fig. 37. *Pterophorus leucadactylus* (Walker, 1864). Type. Ceylon (Clerck) (BMNH).

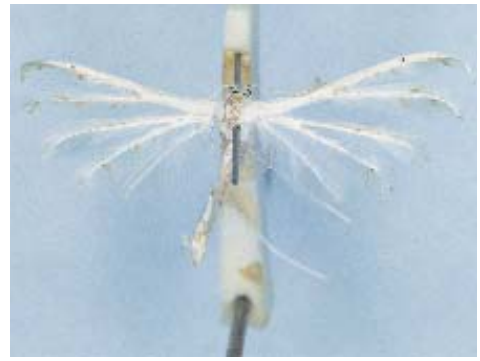

Fig. 38. *P. niveus* (Snellen, 1903). Holotype of *Aciptilia denticulata* Yano, 1963. Indonesia, Irain Jaya, Wareng, 17.viii.1936 (S. Issiki) (USNM).

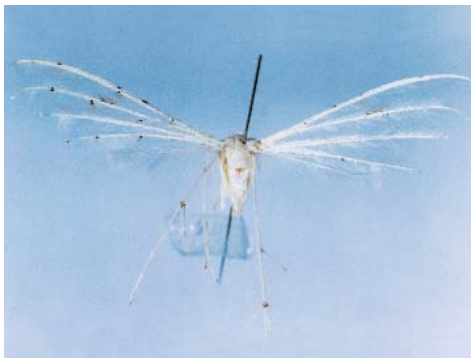

Fig. 39. *P. aliubasignum* Gielis, 2000. Holotype. Indonesia, Irian Jaya, Sorong, 8.vii-14.viii.1948 (MA Lieftinck), gent. CG 3090 (RMNH).

Fig. 40. *P. lacteipennis* (Walker, 1864). Australia, Quuensland, Karunda, 27.xi.1905 (BMNH).

Fig. 41. *P. albidus* (Zeller, 1852). Nigeria, Lagos, 1979 (BMNH).

Fig. 42. *Diacrotricha guttuligera* Diakonoff, 1952. Holotype. Indonesia, Irian Jaya, Sigi Camp, 1500 m, 17.ii.1939 (L.J. Toxopeus), gent. Diakonoff 1039 (RMNH).

Fig. 43. *Cosmoclostis hemiadelpha* Fletcher, 1947. Holotype. Australia, Queensland, Cedar Bay, 1894 (Meek), prep. BM 20497 (BMNH).

Fig. 44. *Cosmoclostis lamprosema* Fletcher, 1947. Indonesia, Amboyna, 1892 (BMNH).

Fig. 45. *Cosmoclostis pesseuta* Meyrick, 1906. Holotype of *Cosmoclostis premnicola* Fletcher, 1932. India, Pusa, 4.ix.1930 (Rangj), gent. BM 20505 (BMNH).

nae shortly ciliated, ringed dark brown and white. Thorax dark brown. Tegulae and mesothorax grey-brown. Ventral part of thorax white. Hind legs white, with two pairs of spurs, around base of spurs a dark brown scale bristle. Pairs of spurs of unequal length; with proximal pair longer than distal pair.

Forewing cleft from 4/9th, dark brown. In first lobe at 1/3rd and 2/3rd indistinct paler transverse lines, in second lobe at 1/3rd only. Fringe dark grey; paler near apices; a narrow black dash at anal region of first lobe and at apex of second lobe (in paler area); grey-white at dorsum of wing with black dashes at 1/3rd and 2/3rd and at anal region of second lobe. Underside dark brown, with some white scales in first lobe at 1/3rd and 2/3rd.

Hingwing and fringe dark brown. At the apex of third lobe some whitish fringe hairs, and a subterminal black scale tooth at dorsum. Underside dark brown. Venous scales black-brown, in a double row, costal row longer.

Male genitalia.— Valves symmetrical, but fixed to tegumen arch. Valves bilobed, basal half elliptoid, and distal half stalked and elliptoid too; tip of valve spiculated; a spinal saccular process almost as long as basal half of valve. Tegumen gradually narrowing, one and a half times length of valves, indented. Uncus globular, at 2/3rd of tegumen. Saccus narrow, almost half-moon-shaped. Aedeagus as long as tegumen, angulated, basally almost parallel, tip part gradually narrowing towards a sharp tip; in basal 1/5th a narrow sclerotized streak.

Female genitalia.— Unknown.

Ecology.— The moth flies in March. The hostplant is unknown.

Distribution.— Indonesia: Irian Jaya.

Forewing cleft from 5/8th, ochreous. Markings brown: a small spot just before base of cleft and some scattered scales on wing, mainly in costal area. Fringe ochreous-grey. Underside pale brown.

Hingwing and fringe brown-grey. Underside pale brown. Venous scales black-brown, in a double row, costal row longer than posterior row.

Male genitalia.— Left valve with a central sclerotized plate, with a cucullar, short spine. Right valve narrower and smaller than left valve, with a rounded saccular process, ending at 4/5th, and a small sclerotized saccular ridge at middle of valve. Tegumen bilobed. Uncus as long as tegumen, slender. Anellus arms asymmetrical, vinculum stout. Saccus waved, rather narrow. Aedeagus straight with curved tip. No cornutus.

Female genitalia.— Unknown.

Ecology.— The moth flies in October at an altitude of 1500-1600 meters. The host-plant is unknown.

Distribution.— Indonesia: Irian Jaya.

Etymology.— The species is named after the village in central Irian Jaya where it has been collected: Wamena.

Remarks.— The species belongs to the *H. lienigianus*-group. Differences between species are limited and mainly found in the genital structure.

Hellinsia tariensis spec. nov.
(figs 30, 74, 106)

Material.— Holotype ♂ (ZMUC), "Papua New Guinea, Southern Highlands, Tari, 5000', 19.xi.1984 (D. Agassiz), gent. CG 4606. Paratypes: 6 ♂♂ + 1 ♀ (ZMUC, CG), "Papua New Guinea, Southern Highlands, Tari, 9000', 3.xi.1984, 4.xi.1984, 8.xi.1984, 16.xi.1984, 17.xi.1984 (D. Agassiz), gent. CG ♀ 4607".

Diagnosis.— The species is characterized by the shape of the male genitalia.

Description.— Male, female. Wingspan 15-17 mm. Head appressedly scaled, pale brown, between the bases of the antennae ochreous. Collar slightly darker. Palps slender, protruding, as long as diameter of eye, pale brown. Antennae shortly ciliated, segments alternatively grey-white and pale brown. Thorax and tegulae pale brown. Mesothorax paler than thorax. Abdomen pale brown-ochreous. Legs pale brown-ochreous. Hindleg with two pairs of spurs, the proximal pair longer than the distal one, pale brown-ochreous, tip of spurs dark.

Forewings cleft from 2/3rd, brown-ochreous. Spots brown: a small spot just before base of cleft; costal spot in first lobe, a bigger one at 1/3rd and a small one at 2/3rd; a dorsal spot in first lobe at 4/5th; in indistinct spot at termen of second lobe at apex, midtermen and anal angle. Wing colour slightly darkening towards apices of lobes. Fringe brown-grey. Underside dark brown, gradually paler towards apices of lobes.

Hindwing and fringe brown-grey. Underside dark brown. Venous scales black, in two rows, the costal row the longer.

Male genitalia.— Left valve with a sclerotized plate, which has a saccular obtuse knob-like extension and a short cucullar spine. Right valve with a central saccular plate. Tegumen long and slender. Uncus slender, as long as tegumen. Vinculum slender, bilobed. Anellus arms asymmetrical. Saccus narrow. Aedeagus straight and slender. No cornutus.

Female genitalia.— Ostium irregularly shaped. Antrum as long as wide near ostium, gradually narrowing. Ductus bursae three times longer than antrum. Bursa copulatrix vesicular, without signum. Papillae anales simple. Apophyses posteriores 2.5 times as long as papillae anales. Apophyses anteriores absent. Lamina antevaginalis as a simple sclerotized ridge.

Ecology.— The moth flies in November at an altitude of 1525-2750 m. The hostplant is unknown.

Distribution.— Papua New Guinea: Southern Highlands.

Etymology.— The species is named after the village where it has been collected, Tari.

Remarks.— The species belongs to the *H. lienigianus*-group. The differences between species are limited and mainly found in the genital structure.

Hellinsia agassizi spec. nov.
(figs 31, 107)

Material.— Holotype ♀ (ZMUC), "Papua New Guinea, Enga, Wabag, Kaiap, 9000', 9.xi.1984 (D. Agassiz), gent. CG 4609".

Diagnosis.— The species is characterized by the shape of the ostium and antrum in the female genitalia.

Description.— Female. Wingspan 23 mm. Head appressedly scaled, dorsally and between antennae creamy white, face grey-brown. Collar with long erect ferrugineous scales and a rim of flat ferrugineous scales. Palps slender, protruding, one and a half times as long s diameter of eye, grey-brown. Antennae shortly ciliated, basally whitish, terminally grey. Thorax, tegulae and mesothorax creamy white with a pale brown gloss. Abdomen creamy white with narrow parallel brown lines centrally dorsal and dorso-lateral, at caudal end of segments a medio-dorsal, small, dark patch of scales. Legs longitudinally striped dark brown and ochreous-white. Hindleg with two pairs of spurs of equal length, spurs of the proximal pair longer than those of distal pair.

Forewing cleft from 3/5th, ochreous-white with a gloss of pale brown scales. Dark brown spots in the discus, just before the base of the cleft, at the costa of the first lobe just beyond the base of the cleft and at 2/3rd, at the apex of the first lobe, and scattered scales along the dorsum of the wing, pronounced at 1/3rd and in the second lobe. Fringe brown-grey; around the apex of the first lobe with a narrow basal paler line. Underside dark brown, with an oblique darker spot before the base of the cleft; and paler towards the apex of the first lobe.

Hindwing and fringe brown-grey. Underside dark grey-brown. Venous scales black, in a double row, the costal row longer than posterior one.

Male genitalia.— Unknown.

Female genitalia.— Ostium left-laterally positioned, flat. Antrum almost rectangular, lateral with a "S"-shaped margin. Ductus bursae 1/3rd of width of antrum, four times longer than antrum. Bursa copulatrix vesicular, without signum. Vesica seminalis slender, twice length of bursa copulatrix. Papillae anales simple. Apophyses posteriores 1.3 times as long as papillae anales. Lamina postvaginalis shaped like a narrow sclerotized ridge. Lamina antevaginalis simple, hardly developed.

Ecology.— The moth flies in November at an altitude of 2750 m. The hostplant is unknown.

Distribution.— Papua New Guinea: Enga.

Etymology.— The species is named after its collector and eminent microlepidopterist: Dr David Agassiz.

Hellinsia kaiapensis spec. nov.
(figs 32, 108)

Material.— Holotype ♀ (ZMUC), "Papua New Guinea, Enga, Wabag, Kaiap, 9000', 9.xi.1984 (D. Agassiz), gent. CG 4610".

Diagnosis.— The species is characterized by the centrally positioned ostium of the female genitalia, shaped like a horizontal half-moon.

Description.— Female. Wingspan 17 mm. Head appressedly scaled, dark brown, between - bases of - antennae ochreous. Palps slender, protruding, 1.5 times as long as diameter of eye, dorsally dark brown, ventrally brown-ochreous. Antennae shortly ciliated, grey-white. (No scales on thorax). Tegulae and mesothorax ochreous. Fore and midleg longitudinally striped dark brown and creamy white. Hindleg cream-white, with two pairs of spurs of equal length, proximal pair longer than distal pair.

Forewing cleft from half, ochreous-yellow. A diffuse brown scaling between dorsal base of the wing and the base of the cleft; along the costa and dorsum and brown spots at 1/5th of the costa of the first lobe, 4/5th of the dorsum of the first lobe and at the apex and anal angle of the second lobe. Fringe grey-brown. Underside dark brown, progressively mixed with ochreous scales towards the apices; spots brown as above.

Hindwing and fringe pale brown-grey. Underside brown. Venous scales black, in a double row, the costal row longer than posterior row.

Male genitalia.— Unknown.

Female genitalia.— Ostium centrally positioned in abdomen, shaped like a horizontally positioned half-moon. Antrum twice width of ostium, first narrowing with two small sclerites, later bulging. Ductus bursae narrow and small. Bursa copulatrix long, vesicular. Vesica seminalis half length of bursa copulatrix, vesicular. No signum. Papillae anales simple. Apophyses posteriores 1.5 times as long as papillae anales. Apophyses anteriores almost as long as papillae anales.

Ecology.— The moth flies in November at an altitude of 2750 m. The hostplant is unknown.

Distribution.— Papua New Guinea: Enga.

Etymology.— The species is named after the type locality: Kaiap.

Hellinsia carphodactoides spec. nov.
(figs 33, 109)

Material.— Holotype ♀ (ZMUC), "Papua New Guinea, Southern Highlands, Tari, 5000', 19.xi.1984 (D. Agassiz), gent. CG 4611".

Diagnosis.— The species is characterized by the shape of the female genital structure. The moth resembles the Palaearctic *Hellinsia carphodactyla* (Hübner, [1813]) very much, and genital examination is necessary for seperation.

Description.— Female. Wingspan 15 mm. Head appressedly scaled, brown-grey, between bases of antennae grey-white. Collar with erect long brown-grey scales. Palps slender, protruding, 1.3 times as long as diameter of eye, segments 1 and 2 brown-grey, segment 3 grey-white. Antennae shortly ciliated, laterally grey-white, medially black-brown. Thorax, tegulae and mesothorax bone white.

Fore wings cleft from 1/2, bone white. Brown-grey spots at base of cleft, at $1/4^{th}$ of the costa of first lobe, at $3/4^{th}$ of dorsum of the lobe, at apex of second lobe and at $3/4^{th}$ and $4/5^{th}$ of dorsum of second lobe. Fringe pale brown-grey. Underside pale grey, with markings as above.

Hind wings pale grey-white. Fringe pale grey. Underside grey. Venous scales ferrugineous, in a double row, with costal row longer than posterior row.

Male genitalia.— Unknown.

Female genitalia.— Ostium right-centrally positioned in abdomen, centrally excavated. Antrum short, with two small sclerites. Ductus bursae slender, rather short. Bursa copulatrix vesicular, without signum. Papillae anales simple. Apophyses posteriores three times papillae anales. Apophyses anteriores absent. Lamina antevaginalis centrally with a narrow ridge, which is sclerotized.

Ecology.— The moth flies in November at an altitude of 1550 m. The hostplant is unknown.

Distribution.— Papua New Guinea: Southern Highlands.

Etymology.— The name of this species reflects the similarity to *Hellinsia carphodactyla* (Hübner, [1813])

Hellinsia mesoleucus (Diakonoff, 1952)
(figs 34, 75)

This species is only known from the type series from the Baliem Valley: Lake Habbema and Scree Camp.

Hellinsia probatus (Meyrick, 1938)
(figs 35, 110)

This species is only known from the type specimen collected at Mount Tafa.

Adaina microdactyla (Hübner, [1813])
(figs 36, 76, 111)

The species is known from the Palaearctic and Indo-Australian regions; in Southeast Asia it occurs in the Philippine and Indonesian Archipelago up to New Guinea. Collected at Tari (ZMUC) and Wamena (ZMA).

Pterophorus leucadactylus (Walker, 1864)
(figs 37, 77, 112)

The species has been described from Sri Lanka. Also found from Sumba (Indonesia; Gielis, 2000). Two specimens examined from Tandia, south of Wasior (ZMA)

Pterophorus niveus (Snellen, 1903)
(figs 38, 78, 113)

After the confirmation (Gielis, 2000) of the identity of this species, it has been recognized from Sorong and Lea (RMNH). The type specimens from *A. denticulata* originate from Wareng.

Remarks.— After studying the holotype, description and illustrations by Yano of *Aciptilia denticulata* (Yano, 1963), I have to conclude that this species is a junior synonym of *P. niveus* (Snellen, 1903) (**syn. nov.**).

Pterophorus aliubasignum Gielis, 2000
(figs 39, 114)

This recently recognized species is so far only known from the type-series.

Pterophorus lacteipennis (Walker, 1864)
(figs 40, 79, 115)

This species occurs in south and southeast Asia. Examined from Tari (ZMUC).

Pterophorus ebbei Arenberger, 1989
(figs 80, 116)

This species is only known from the type series.

Pterophorus albidus (Zeller, 1852)
(figs 41, 81, 117)

A species distributed in Africa, South, and Southeast Asia. The eastern range of its distribution reaches New Guinea at Madang, Tari (ZMUC) and Sentari near Hollandia (ZMA). Yano (1963) also mentions Wareng, Wau, and the Kebar Valley W of Manokwari.

Diacrotricha guttuligera Diakonoff, 1952
(figs 42, 82)

This species is only known from the holotype, collected in the Baliem Valley, Sigi Camp.

Cosmoclostis hemiadelpha Fletcher, 1947
(figs 43, 83)

The type specimens has been described from Queensland, Australia. Yano (1963) mentions specimens from Wareng and the Oriomo Governmental Station.

Cosmoclostis lamprosema Fletcher, 1947
(figs 44, 84, 118)

The type specimen has been described from the Solomons Islands. Yano (1963) mentions Maprik, Sepik and Cape Rodney.

Cosmoclostis pesseuta Meyrick, 1906
(figs 45, 85,119)

The type specimen and its synonym have been described from India and Sri Lanka. Yano (1963) mentions Wareng and Hollandia-Binnen.

Acknowledgements

The author wishes to thank Mr O. Karsholt, Zoologisk Museum, University of Copenhagen, Denmark (ZMUC), Dr S.E. Miller, Bishop Museum, Honolulu, Hawaiï, USA (BPBM), Mrs Dr S.A. Ulenberg, Zoologisch Museum, Amsterdam, The Netherlands (ZMA) and Mr J. van Tol, Nationaal Natuurhistorisch Museum, Leiden (RMNH), The Netherlands for the loan of material needed for this publication; and Mr H.W. van der Wolf for his linguistic support.

References

Amsel, H.G., 1935. Neue palästinensische Lepidopteren.— Mitt. zool. Mus. Berlin 20: 271-319, 10 pl.

Amsel, H.G., 1951. Neue Maroccanische Kleinschmetterlinge.— Bull. Soc. Sci. Nat. Maroc 31: 65-74.

Arenberger, E., 1989. Beitrag zur Kenntnis der Indo-Australischen *Pterophorus*-Arten.— Ent. Z., Frankfurt am Main 99: 81-88.

Arenberger, E. & Gielis, C., 1988. Taxonomy of the *Ochyrotica connexiva* group.— Tijdschr. Ent. 131: 271-284.

Bigot, L., 1962. Les Pterophoridae des îles Seychelles.— Bull. Soc. ent. France 67: 79-88, 9 figs

Busck, A., 1914. New microlepidoptera from Hawaii.- Insecutor Inscitiae Menstruus 2: 103-104.

Butler, A.G., 1881. On a collection of nocturnal lepidoptera from the Hawaiian Islands.— Ann. Mag. Nat. Hist. 7 (5th series): 407-408.

Diakonoff, A., 1952. Microlepidoptera of New Guinea. Results 3th Archbold Expedtion (Pterophoridae).— Kon. Ned. Ak. Wet., Verh. Afd. Nat. (2) 44: 1-167.

Durrant, J.H., 1917. Reports on the collections made by the British Ornithologists Union Expedition and the Wollaston Expedition in Dutch New Guinea, 1910-1913. 2: 163-164.

Fabricius, J.C., 1793. Entomologia systematica emendata et aucta: secundum classes, ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Vol. 3, pars 1: 1-487; 1794, pars 2: 1-349.— Copenhagen.

Felder, R. & Rogenhofer, A.F., 1875. Atlas der Heterocera. In: Reise der Österreichischen Fregatte Novara um die Erde in den Jahren 1857-1859. Zoology 2 (2): plate 140.

Fish, C., 1881. Pterophoridae.— Can. Ent. 13: 70-74, 140-143.

Fletcher, T.B., 1910. On the genus *Deuterocopus* Zeller.— Trans. ent. Soc. London (1910) II: 107-141, 2 plates.

Fletcher, T.B., 1932. Life-histories of Indian microlepidoptera (second series): Alucitidae, Tortricina and Gelechiadae.— Monograph Imp. counc. agric. Res. Sciences 2: 1-58.

Fletcher, T.B., 1947. Some species of *Cosmoclostis*.— R. ent. Soc. London (B) 16: 42-52.

Gaede, M., 1916. *Ochyrotica Bürger*si n. sp.— Int. ent. Z. 10 (15): 81.

Gielis, C., 1990. Additions to the genus *Ochyrotica* Walsingham, 1891, in southeast Asia.— Bishop Mus. Occ. Papers 30: 294-297.
Gielis, C., 2000. On the genus *Pterophorus* Schäffer, 1766 in Indonesia.— Quadrifina 3: 61-69.
Gielis, C. & Arenberger, E., 1991. Taxonomy of the *Ochyrotica cretosa* group.— Bishop Mus. Occ. Papers 31: 131-138.
Hartig, F.G., 1953. Descrizione di tre specie di lepidotteri dell'isola de Zannore.— Boll. Soc. ent. Ital. 83: 67-69.
Hofmann, O, 1898e. Eine neue *Amblyptilia*.— Dt. ent. Z. Iris 1898: 33-34.
Hori, H., 1936. Two plume moths of the Palau Islands collected by Prof. Teiso Esaki in 1936.— Mushi 9: 14-16.
Hübner, J., 1796-1834. Sammlung Europaeische Schmetterlinge. 1-78, plts 1-71.— Augsburg.
Makhan, D., 1994. Two new Pterophoridae from Surinam.— SHILAP, Madrid 22: 353-355.
Matsumura, S., 1931. 6000 illustrated insects of Japan-Empire. ii, ii, iii, 23, 1497, 191, 2, 6 pp., 10 plates.— Tokohshoin, Tokyo.
Meyrick, E., 1886. On the classification of the Pterophoridae.— Trans. ent. Soc. London 1886: 1-21.
Meyrick, E., 1887. On Pyralidina from Australia and the South Pacific.— Trans. ent. Soc. London 1887: 185-268.
Meyrick, E., 1888. On the Pyralidina of the Hawaiian Islands.— Trans. ent. Soc. London 1888: 239-241.
Meyrick, E., 1906. Descriptions of Indian Microlepidoptera, II.— J. Bombay Nat. Hist. Soc. 17: 133-136.
Meyrick, E., 1908. Notes and descriptions of Pterophoridae and Orneodidae.— Trans. ent. Soc. London 1907: 471-511.
Meyrick, E., 1913. Exotic Microlepidoptera 1: 97-128.
Meyrick, E., 1922. Exotic Microlepidoptera 2: 545-576.
Meyrick, E., 1926. Microlepidoptera from the Galapagos Islands and Rapa.— Trans. ent. Soc. London 74: 276.
Meyrick, E., 1930. Exotic Microlepidoptera 3: 545-576.
Meyrick, E., 1932. Exotic Microlepidoptera 4: 225-256, 321-352.
Meyrick, E., 1936. Exotic Microlepidoptera 4: 609-642; 5: 33-64.
Meyrick, E., 1938. Papuan microlepidoptera.- Trans. R. ent. Soc. London 87: 503-504.
Pagenstecher, A., 1900. Die Lepidopterenfauna des Bismarck-Archipels.— Zoologica, Stuttg. 27: 238-242.
Snellen, P.C.T., 1903. Beschrijvingen van nieuwe exotische Tortricinen, Tineinen en Pterophornen.— Tijdschr. Ent. 46: 54-56.
Stephens, J.F., 1835. Illustrations of British Entomology: or, a synopis of indigenous insects,... etc.— Haustellata 4: 1-433. London.
Strand, E., 1913a. Zoologische Ergebnisse der Expedition des Herrn G. Tessmann nach Sued-Kamerun und Spanish-Guinea. Lepidoptera IV.— Arch. Naturgesch. A.12: 63-67, 130-131.
Turati, E., 1926. Novita di lepidotterologica in Cirenaica.— Atti Soc. ital. Sci. nat. 65: 25-83.
Walker, F., 1864. List of the specimens of lepidopterous insects in the collection of the British Museum 30. Lepidoptera Heterocera: 926-953.— London.
Yano, K., 1963. Notes on South Pacific Pterophoridae.— Pacific Insects 5: 849-871.
Zeller, P.C., 1852. Revision der Pterophoriden.— Linnaea Ent. 1: 319-413.
Zeller, P.C., 1872-1875. Beiträge zur Kenntnis der nordamerikanischen Nachtfalter, besonders der Mikrolepidopteren, I-III.— Verh. k. k. zool.-bot. Ges. 22: 447-566, 2 plates; 23: 201-334, 2 plates; 24: 207-360, 3 plates
Zeller, P.C., 1877. Exotische Microlepidoptera.— Hor. Soc. Ent. Ross. 13: 460-486, plate 6.

Received: 21.v.2002
Accepted: 16.ix.2002
Edited: R. de Jong

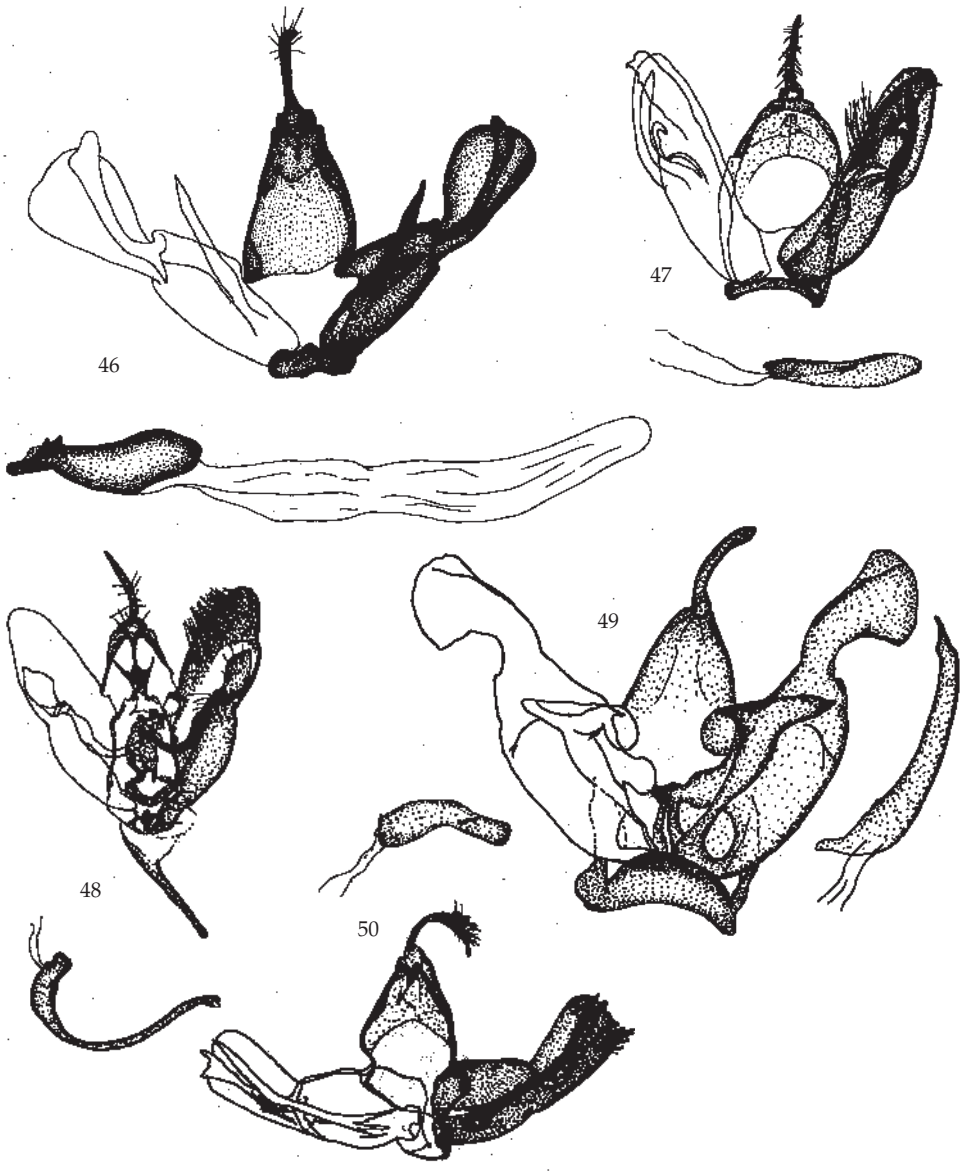

Fig. 46. *Ochyrotica cretosa* (Durrant, 1916). Holotype. Indonesia, Irian Jaya, Mimika River, viii.1910 (A.F.R. Wollaston), gent. BM 17991 (BMNH).
Fig. 47. *O. buergersi* Gaede, 1916. Papua New Guinea, Sogeri Plat, Bisianumu, 1600', 30.vii.1957 (G.P. Holland), gent. CG 3021 (RMNH).
Fig. 48. *O. breviapex* Gielis, 1990. Holotype. Papua New Guinea, NE Wau, Morobe District, 1200 m, 29-30.i.1967 (R. Straatman), malaise trap, gent. CG 3004 (RMNH).
Fig. 49. *O. salomonica* Arenberger, 1991. Holotype. Solomon Islands, Kolombangara Island, on *Merremia peltata*, 20.v.1982 (M. Bigger), gent. Ar. 3545 (BMNH).
Fig. 50. *O. pseudocretosa* Gielis, 1990. Holotype. Indonesia, Irian Jaya, Sorong, 28.viii-6.ix.1948 (M.A. Lieftinck), gent. CG 3037 (RMNH).

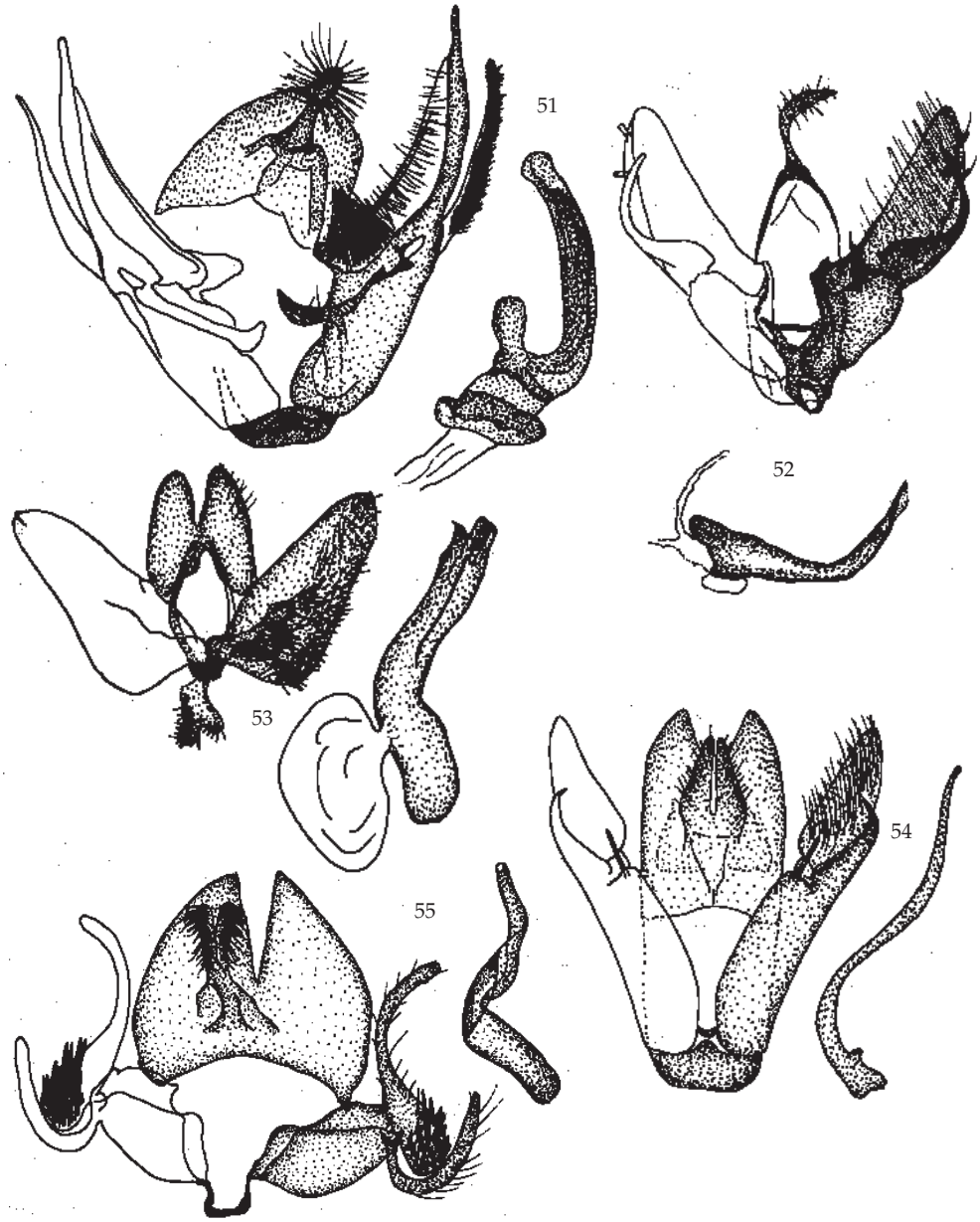

Fig. 51. *O. toxopeusi* Gielis, 1988. Indonesia, S Sulawesi, 1896 (Doherty), gent. BM 21136 (BMNH).
Fig. 52. *O. misoolica* Gielis, 1988. Holotype. Indonesia, Misool, Fakal, 0-75 m, 8.ix-20.x.1948 (M.A. Lieftinck), gent. CG 3006 (RMNH).
Fig. 53. *Hexadactilia trilobata* Fletcher, 1910. Holotype. Papua New Guinea, Ron, vii.1897 (Doherty), prep. BM, 20530 (BMNH).
Fig. 54. *Deuterocopus issikii* Yano, 1963. After Yano, 1963.
Fig. 55. *D. devosi* spec. nov. Holotype. Indonesia, Irian Jaya, Birdhead Peninsula, Manokwari, Gunung Meja Reserve, 2.xi.1993 (A.J. de Boer, A.L.M. Rutten & R. de Vos), gent. CG 4667 (ZMA).

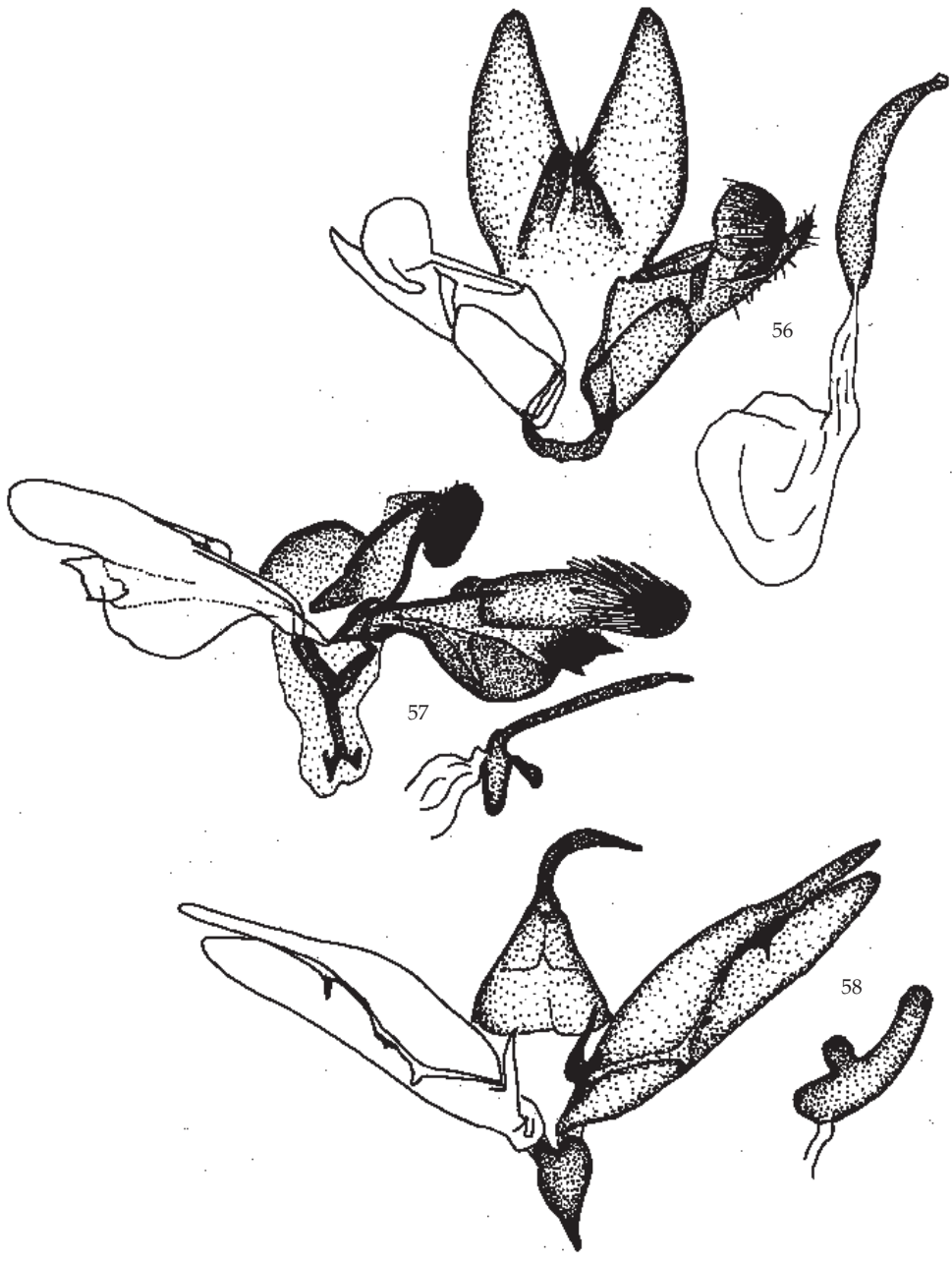

Fig. 56. *D. planeta* Meyrick, 1908. Lectotype. India, Assam, Khasi Hills, xi.1906, gent. BM 20573 (BMNH).
Fig. 57. *Tetraschalis lemurodes* Meyrick, 1908. Syntype. Indonesia, Irian Jaya, Litlle Kei Island, 10.v.(18)98 (S), gent. BM 21315 (BMNH).
Fig. 58. *Fletcherella niphadothysana* Diakonoff, 1952. Solomon Islands, New Britain, Vaisisi, 9.vii.1962 (NOONA), gent. CG 4605 (ZMUC).

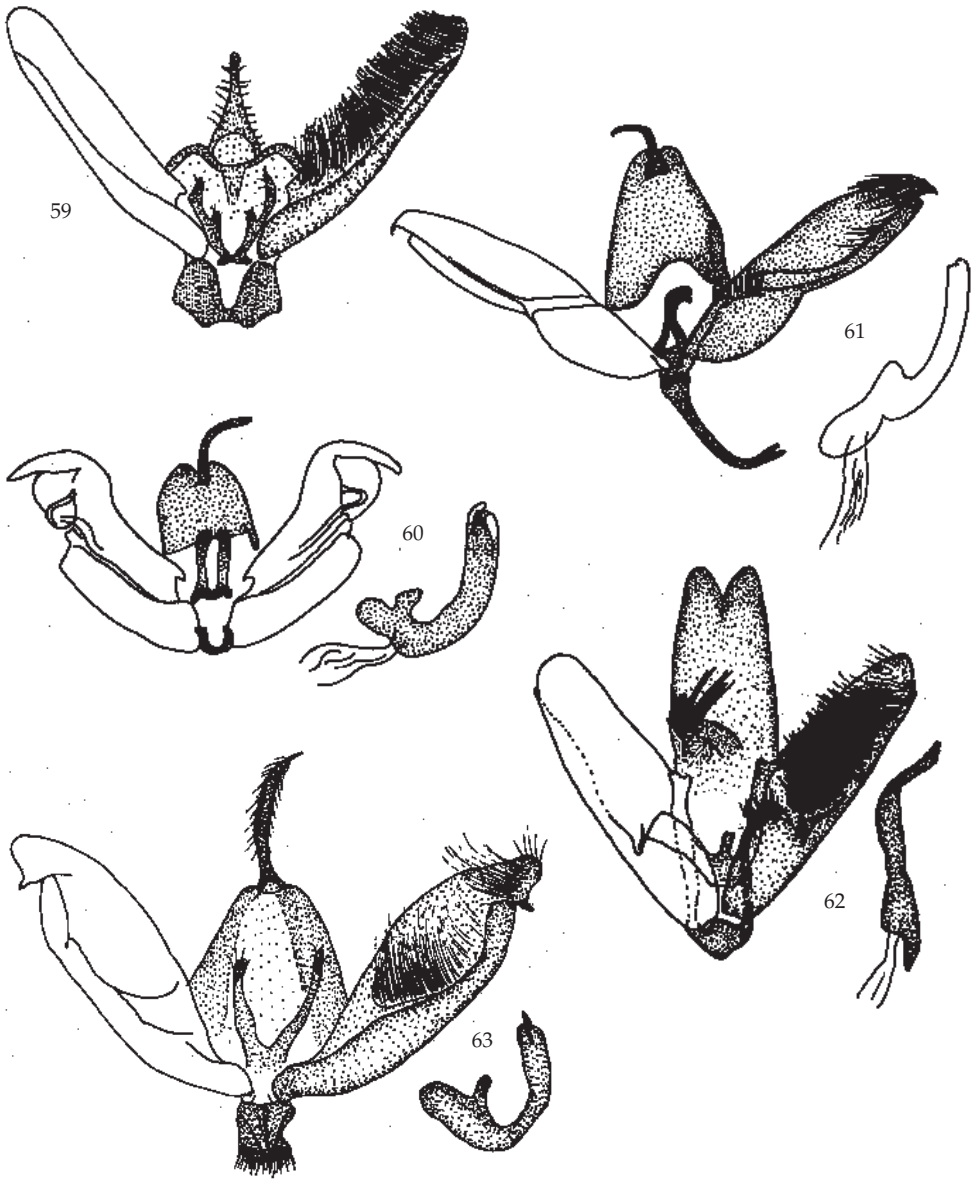

Fig. 59. *Platyptilia petila* Yano, 1963. After Yano, 1963.
Fig. 60. *Stenoptilodes taprobanes* (Felder & Rogenhofer, 1875). Spain, Canary Islands, Puerto de la Cruz, 25.iii-5.iv.1968 (B. van Aartsen), prep. CG 1566 (ZMA).
Fig. 61. *Lantanophaga pusillidactyla* (Walker, 1864). Peru, Lima, Miraflores, 30 m, 19-21.i.1987 (O. Karsholt), pep CG 4153 (ZMUC).
Fig. 62. *Xyroptila marmarias* Meyrick, 1908. Australia, Queensland, Kuranda, 22.xi.1906 (Dodd), gent. BM 20952 (BMNH).
Fig. 63. *Amblyptilia galactostacta* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Letterbox Camp, 3600 m, 5.ix.1938 (L.J. Toxopeus), gent. Diakonoff 1037 (RMNH).

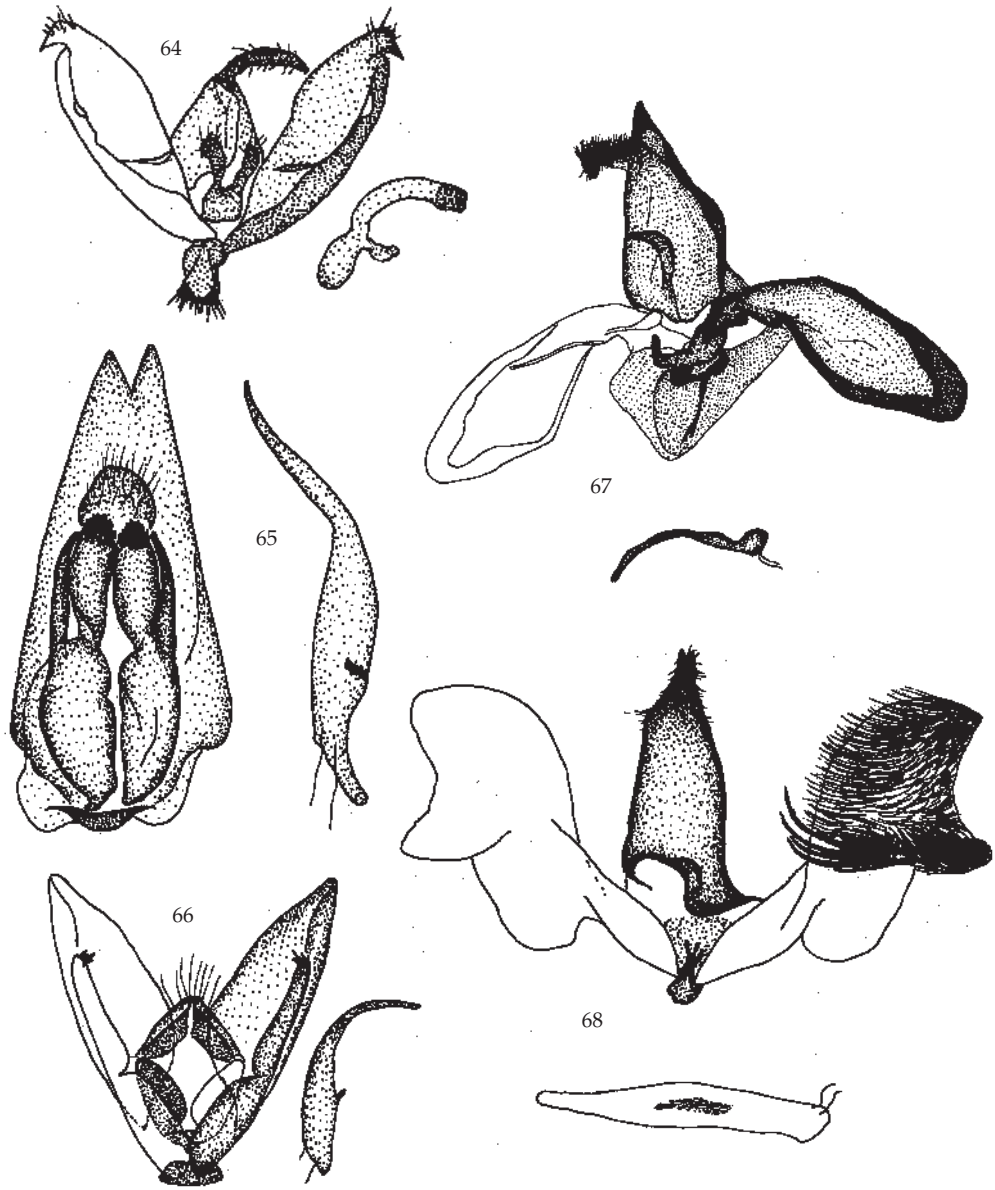

Fig. 64. *A. iriana* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Scree Valley Camp, 3800 m, 20.ix.1938 (L.J. Toxopeus), Gent. Diakonoff 1036 (RMNH).
Fig. 65. *Nippoptilia rutteni* spec. nov. Holotype. Indonesia, Irian Jaya, Birdshead Peninsula, Gunung Bembab, 15 km N Ransiki, 350 m, 1°26'S 134°11'E, 2.iii.1996 (ZMA-exp), gent. CG 4669 (ZMA).
Fig. 66. *N. spinosa* Yano, 1963. After Yano, 1963.
Fig. 67. *Sphenarches anisodactyla* (Walker, 1864). Indonesia, Ardjoeno, n.d. (Herkmeyer), gent. CG 3108 (RMNH).
Fig. 68. *Exelastis pumilio* (Zeller, 1873). Guadeloupe, Domaine Duclos, INRA, vi.1978 (J. Boudinot), prep. CG 1974 (MNHN).

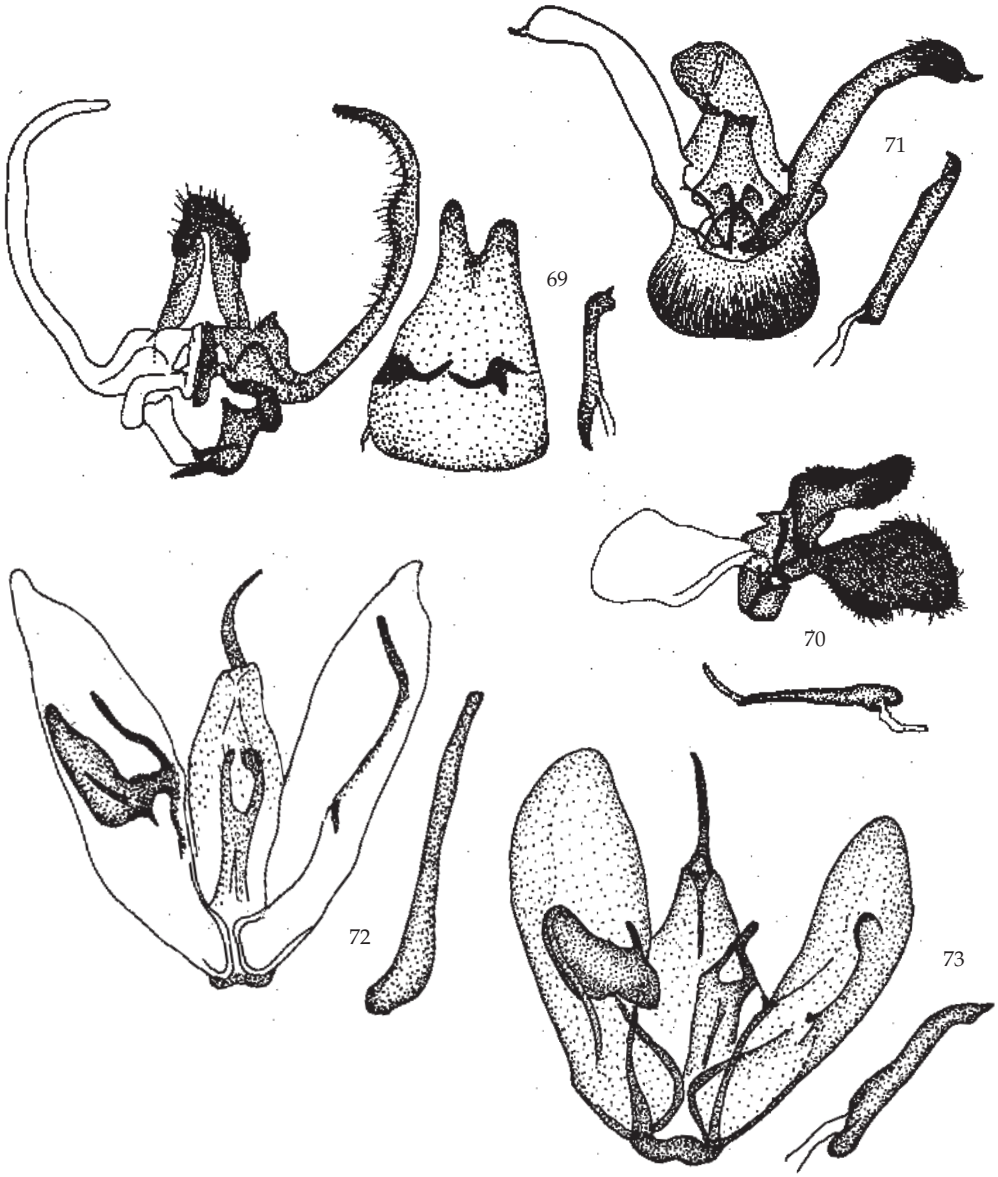

Fig. 69. *Stangeia xerodes* (Meyrick, 1886). Lectotype. Australia, Queensland, Toowoomba, 25.ix.1879, gent. BM 11484 (BMNH).
Fig. 70. *Megalorhipida leucodactyla* (Fabricius, 1793). Côte d'Ivoire, Bouaflé, Bouaflé, 25.viii.1983 (R.T.A. Schouten), prep. CG 2168 (CG).
Fig. 71. *M. deboeri* spec. nov. Holotype. Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 24.x.1993 (A.J. de Boer, A.L.M Rutten & R. de Vos), gent. CG 4388 (ZMA).
Fig. 72. *Hellinsia iraneaus* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Sigi Camp, 1500 m, 26.ii.1939 (L.J. Toxopeus), gent. Diakonoff 1041 (RMNH).
Fig. 73. *H. wamenae* spec. nov. Holotype. Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 17.x.1993 (A.J. de Boer, A.L.M Rutten & R. de Vos), gent. CG 4387 (ZMA).

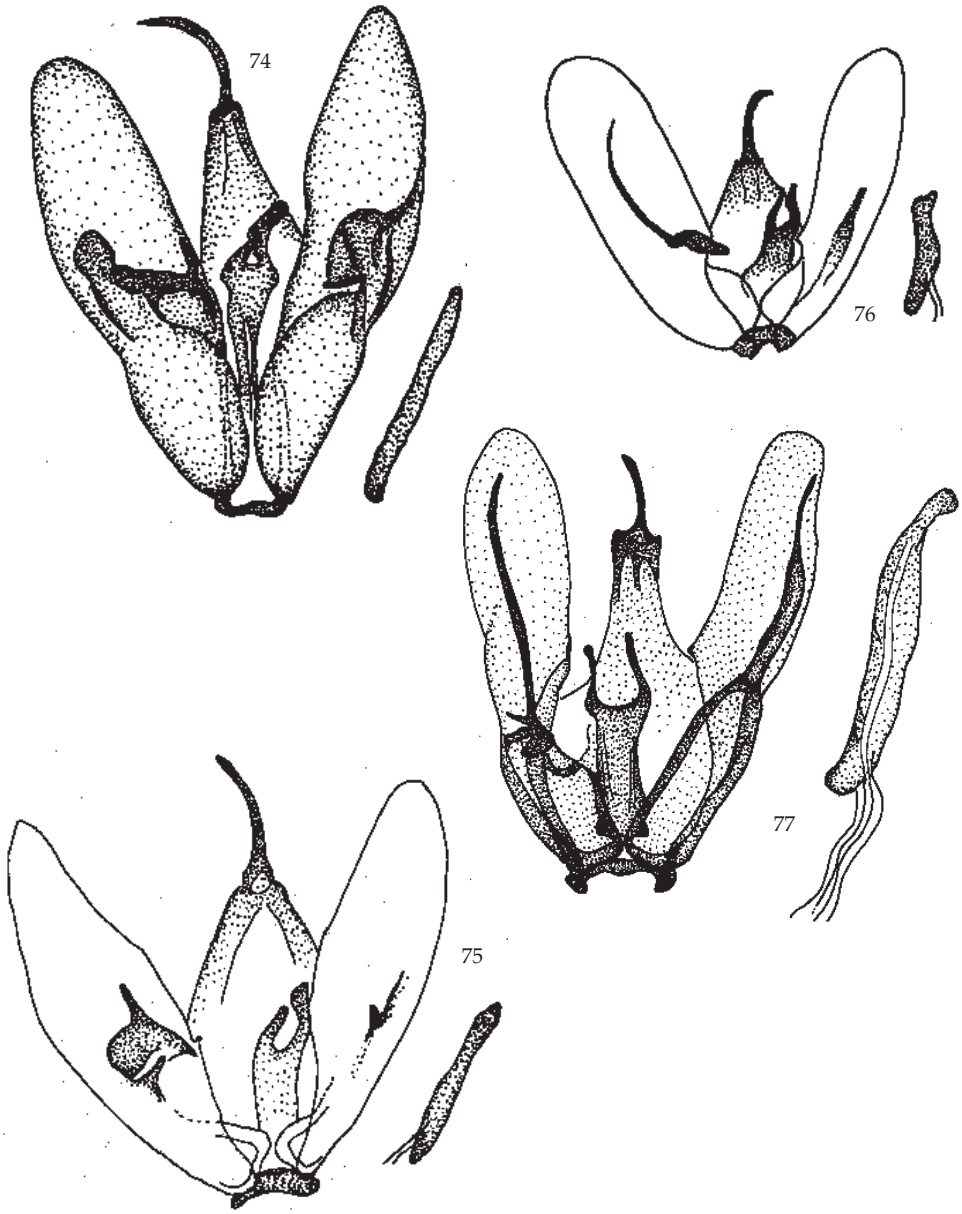

Fig. 74. *H. tariensis* spec. nov. Holotype. Papua New Guinea, Southern Highlands, Tari, 5000', 19.xi.1984 (D. Agassiz), gent. CG 4606 (ZMUC)
Fig. 75. *H. mesoleucus* (Diakonoff, 1952). Holotype. Indonesia, Irian Jaya, Lake Habbema, 3250-3300 m, 1.viii.1938 (L.J. Toxopeus), gent. Diakonoff 1038 (RMNH).
Fig. 76. *Adaina microdactyla* (Hübner, [1813]). Spain, Huesca, Torla, 1100 m, 3.viii.1991 (H.W. v.d. Wolf), prep. CG 2517 (CG).
Fig. 77. *Pterophorus leucadactylus* (Walker, 1864). Ceylon, Kandy, prep. BM 17974 (BMNH).

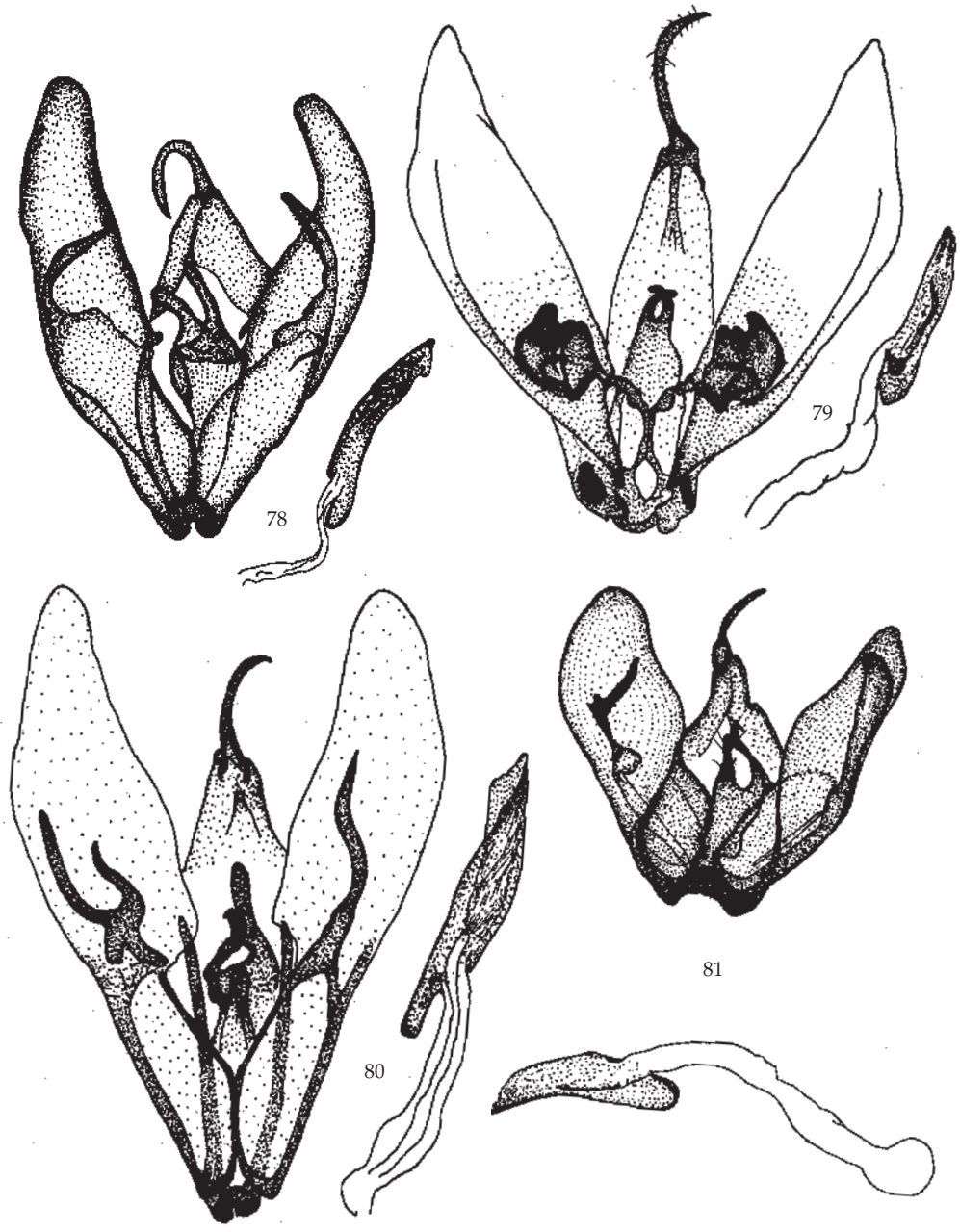

Fig. 78. *P. niveus* (Snellen, 1903). Indonesia, Sumatra, Fort de Kock, 920 m, 1924 (E. Jacobson), gent. CG 3076 (RMNH).
Fig. 79. *P. lacteipennis* (Walker, 1864). Solomon Islands, Island d'Entrecasteaux, Goodenough, 1897 (Meek), prep. BM 18639 (BMNH).
Fig. 80. *P. ebbei* Arenberger, 1989. Sri Lanka, Pundaloya, 3500'-4500', 1890, prep. BM 18634 (BMNH).
Fig. 81. *P. albidus* (Zeller, 1852). Rep. S. Africa, Bloemfontein, 3.iii.1951 (v. Ee), prep. CG 1694 (ZMA).

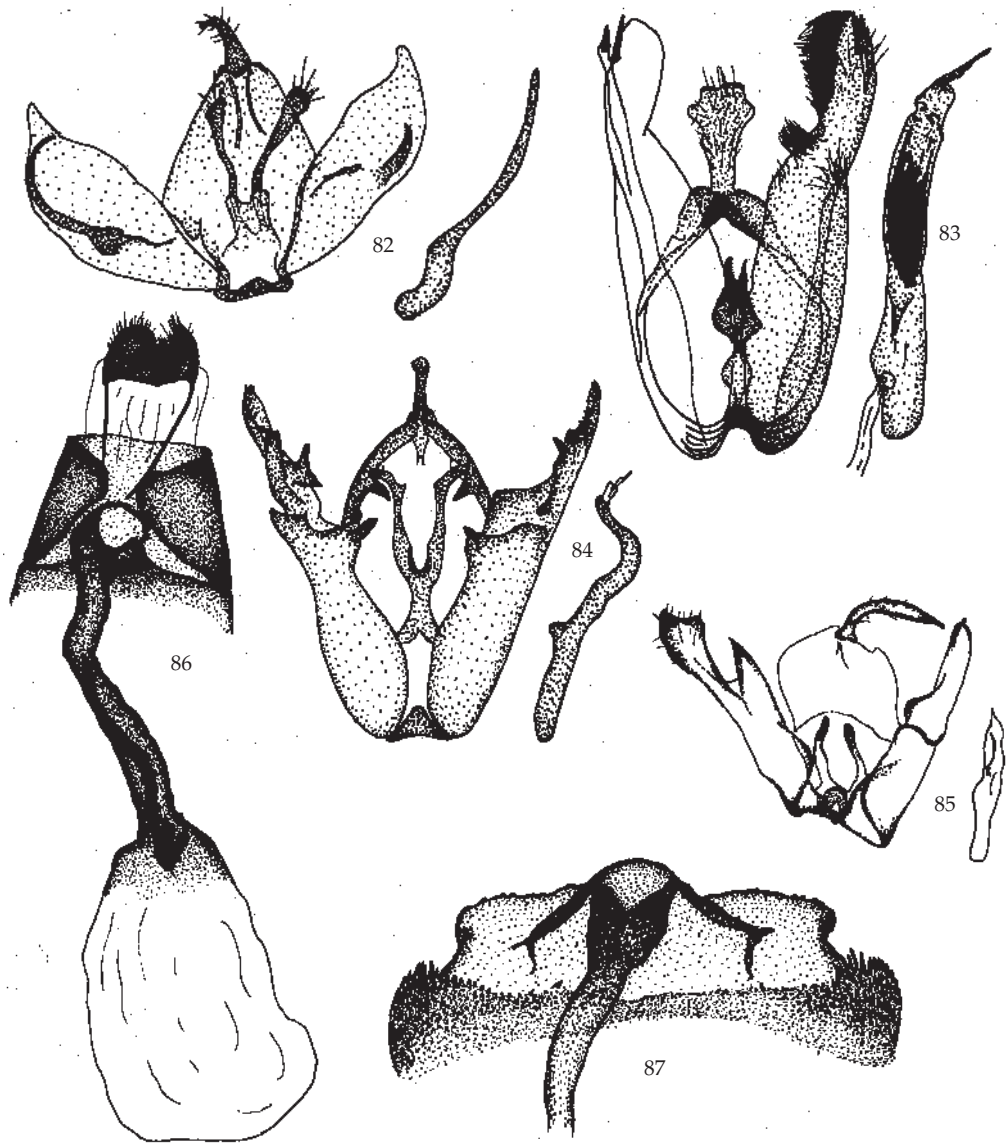

Fig. 82. *Diacrotricha guttuligera* Diakonoff, 1952. Holotype. Indonesia, Irian Jaya, Sigi Camp, 1500 m, 17.ii.1939 (L.J. Toxopeus), gent. Diakonoff 1039 (RMNH).
Fig. 83. *Cosmoclostis hemiadelpha* Fletcher, 1947. Holotype. Australia, Queensland, Cedar Bay, 1894 (Meek), prep. BM 20497 (BMNH).
Fig. 84. *Cosmoclostis lamprosema* Fletcher, 1947. After Yano, 1963.
Fig. 85. *Cosmoclostis pesseuta* Meyrick, 1906. Idonesia, Java, Buitenzorg, 1892, prep. CG 3116 (RMNH).
Fig. 86. *Ochyrotica cretosa* (Durrant, 1916). Indonesia, Halmahera Island, Goa Plateau, 50-100 m, 9.-12.ix.1955, gent. CG 3027 (RMNH).
Fig. 87. *O. buergersi* Gaede, 1916. Papua New Guinea, Nabire, S Geelvink Bay, 0-30 m, 2-9.vii.1962 (J.L. Gressitt & J. Sedlacek), gent. CG 1939 (BPBM).

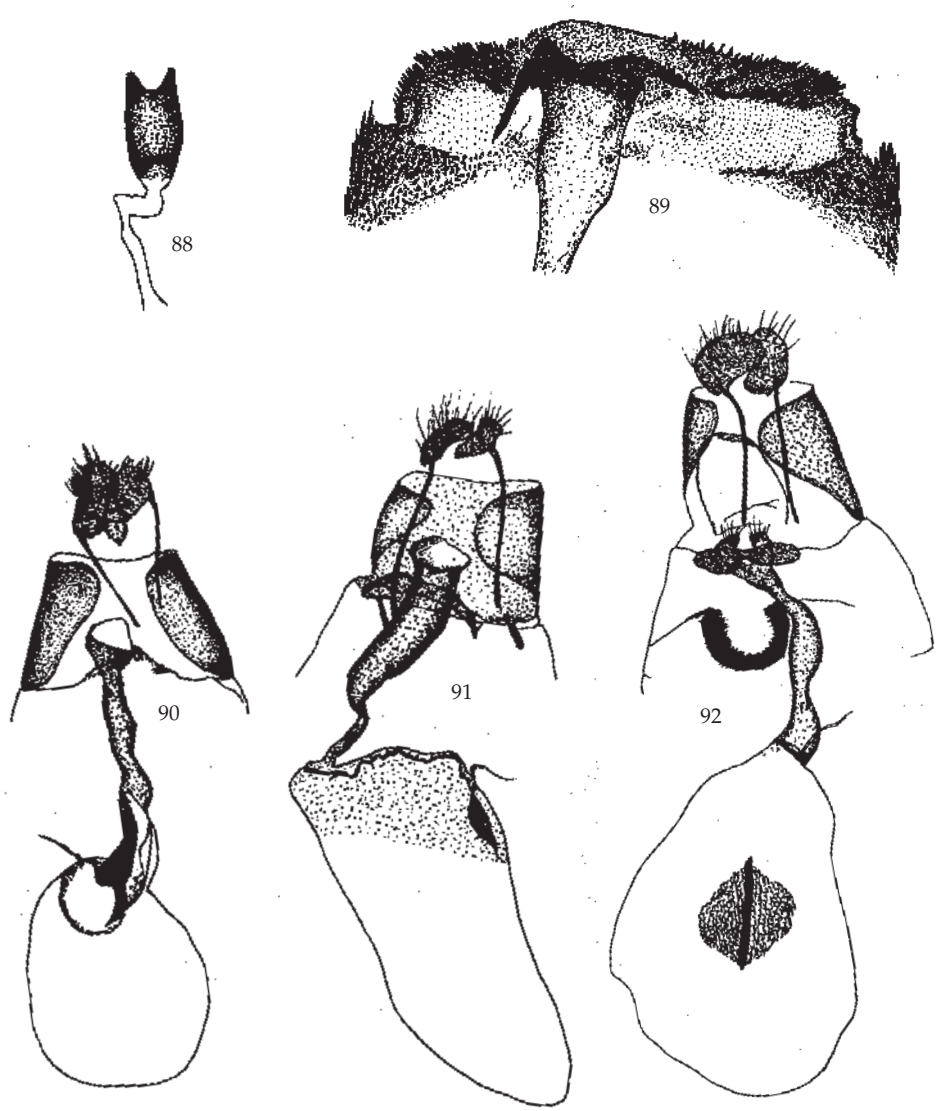

Fig. 88. *O. breviapex* Gielis, 1990. Paratype. Indonesia, New Guinea, Baliem Camp, 16-27.xi.1938 (L.J. Toxopeus), gent. CG 3001 (RMNH).
Fig. 89. *O. salomonica* Arenberger, 1991. Indonesia, Irian Jaya, Sarui, 11.iii.1958 (R.T. Simon Thomas), gent. CG 3038 (RMNH).
Fig. 90. *O. pseudocretosa* Gielis, 1990. Paratype. Indonesia, Irian Jaya, Sorong, 8.vii-14.viii.1948 (M.A. Lieftinck), gent. CG 3029 (RMNH).
Fig. 91. *O. toxopeusi* Gielis, 1988. Holotype. Indonesia, Celebes, Nungo, Watampone, 800 m, 22.vi.1936 (L.J. Toxopeus), gent. CG 3005 (RMNH).
Fig. 92. *O. misoolica* Gielis, 1988. Paratype. Indonesia, N Moluccas, S Batjan, vi-vii.1953 (A.M.R. Wegner), gent. CG 3030 (RMNH).

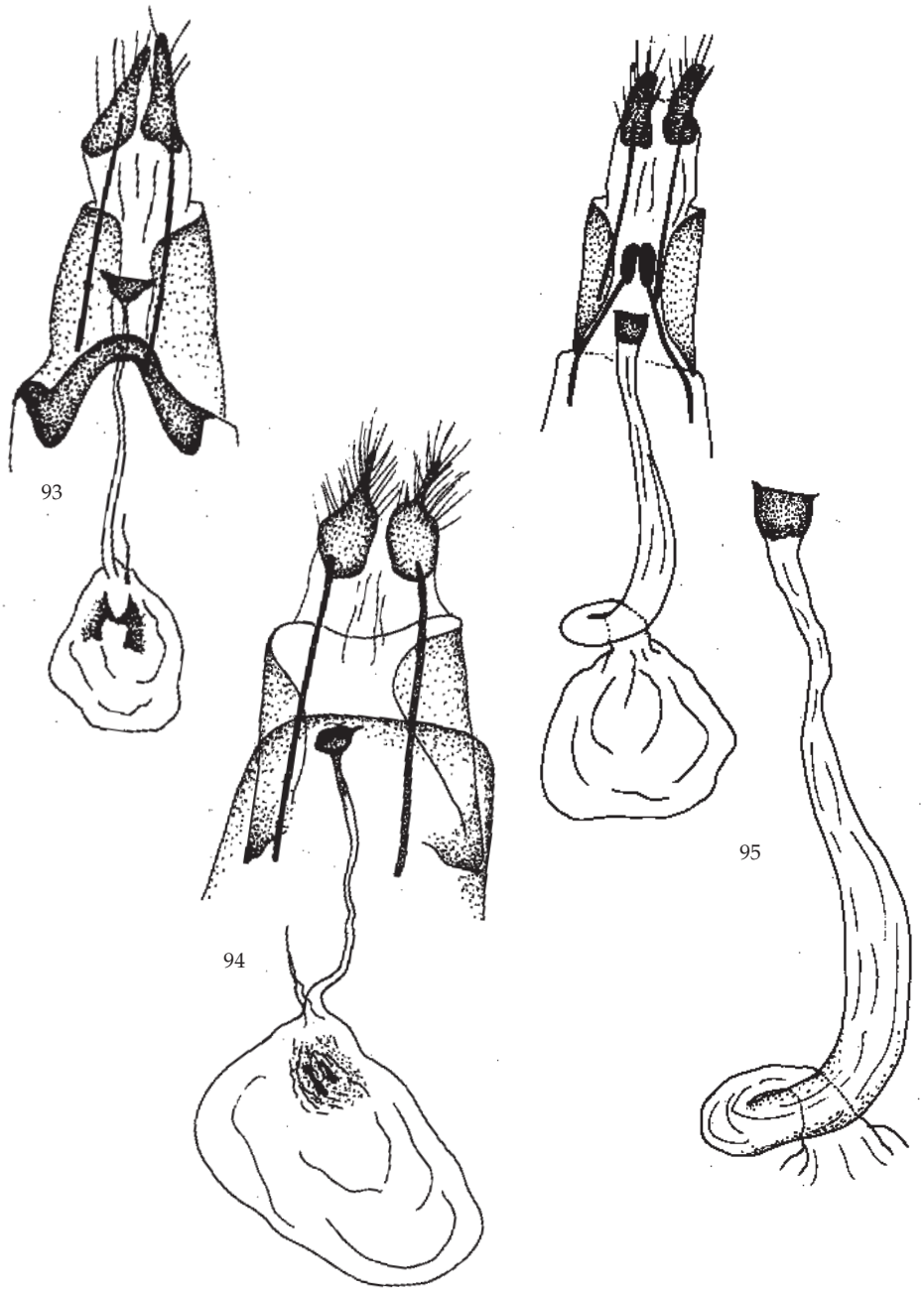

Fig. 93. *D. devosi* spec. nov. Paratype. Indonesia, Irian Jaya, Araucaria Camp, 800 m, 17.iii.1939 (L.J. Toxopeus), gent. CG 4777 (RMNH).
Fig. 94. *D. planeta* Meyrick, 1908. Sri Lanka, S.P. Galle, 26.x.1908, gent. BM 20561 (BMNH).
Fig. 95. *Fletcherella niphadothysana* Diakonoff, 1952. Philippines, Leyte, Lake Dahoa, 650 m, 14-17.iv.1997 (Mey a.o.), gent. CG 4686 (HUB).

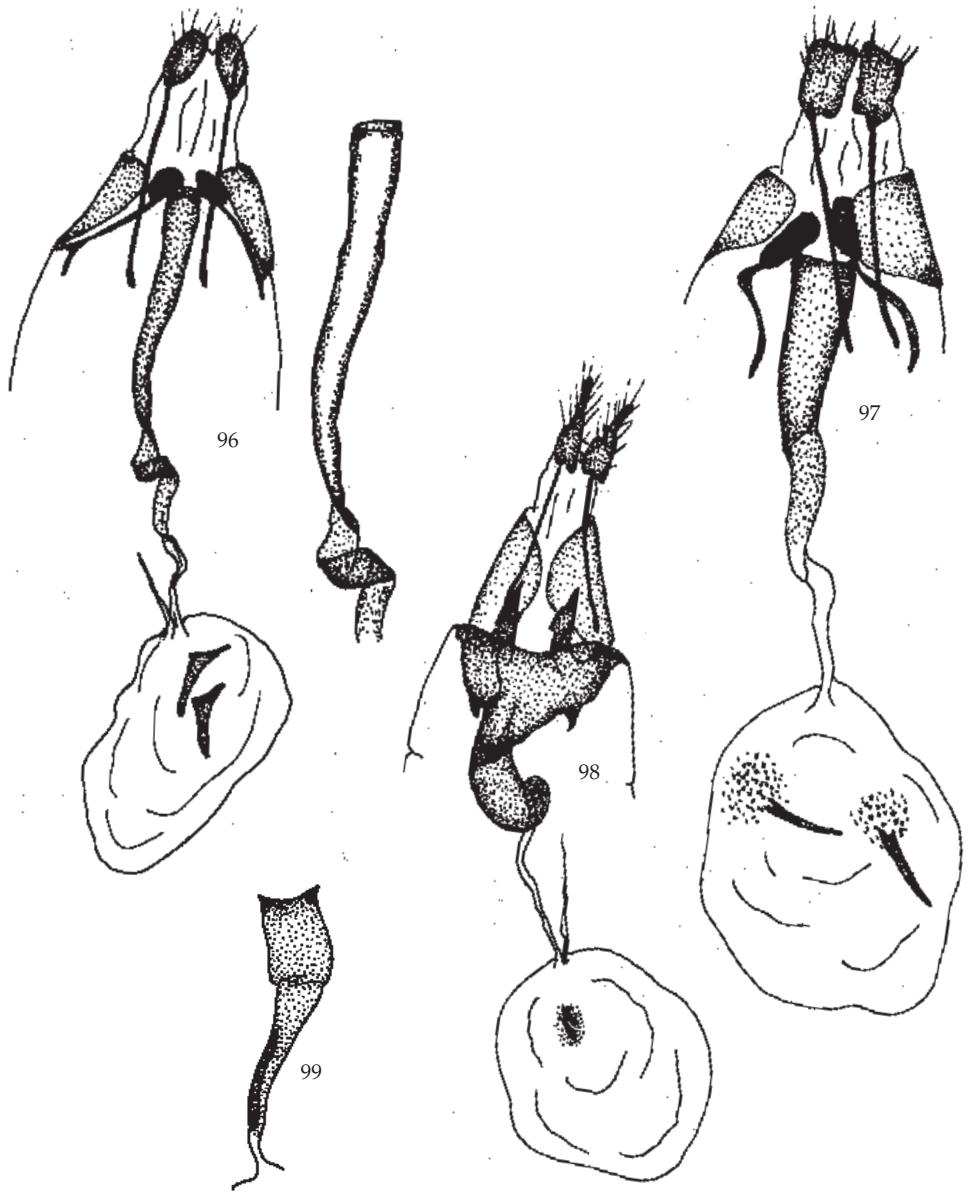

Fig. 96. *Platyptilia petila* Yano, 1963. Papua New Guinea, Southern Highlands, Tari, 5000', 3.xi.1984 (D. Agassiz), gent. CG 4608 (ZMUC).
Fig. 97. *P. phanerozona* Diakonoff, 1952. Holotype. Indonesia, Irian Jaya, Lake Habbema, 3250-3300 m, 5.viii.1938 (L.J Toxopeus), gent. Diakonoff 1040 (RMNH).
Fig. 98. *P. enargota* Durrant, 1915. Sabah, N Borneo, Tawau zone, 75 km W Lahad Datu, 4°58'N 117°48'E, 23-25.x.1987 (J. Huisman & R. de Jong), gent. CG 4776 (RMNH).
Fig. 99. *Stenoptilodes taprobanes* (Felder & Rogenhofer, 1875). Tchad, Bebedja, nr Moundou, 400 m, 30.x.1970 (J.H. & M. Lourens), prep. CG 2001 (CG).

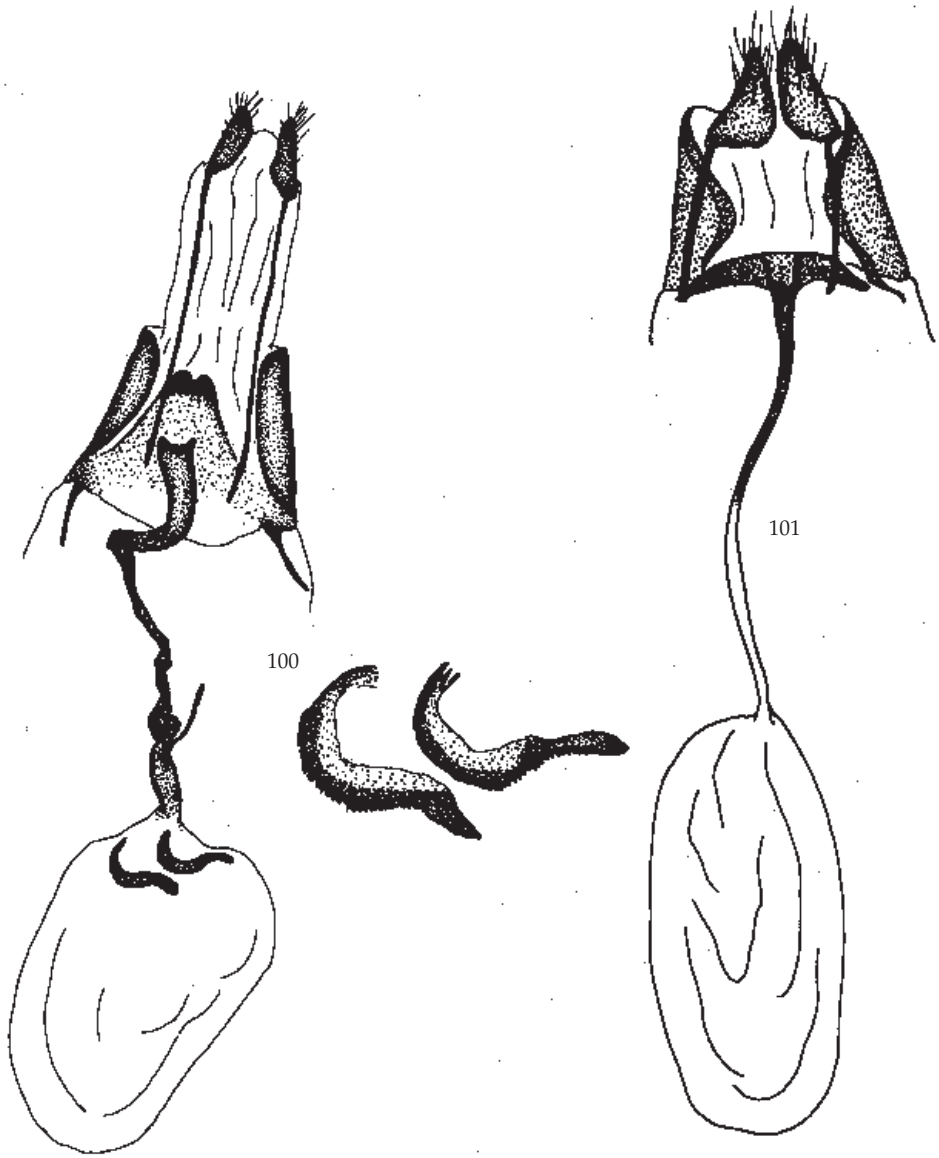

Fig. 100. *Lantanophaga pusillidactyla* (Walker, 1864). Spain, Tarragona, L'Hospitalet d'Infante, 20.ix.1997 (G.E. King), prep. C Hart 1052 (King).
Fig. 101. *Xyroptila marmarias* Meyrick, 1908. Lectotype, Australia, Queensland, Cairns, x.1900 (Doherty), prep. BM 19444 (BMNH).

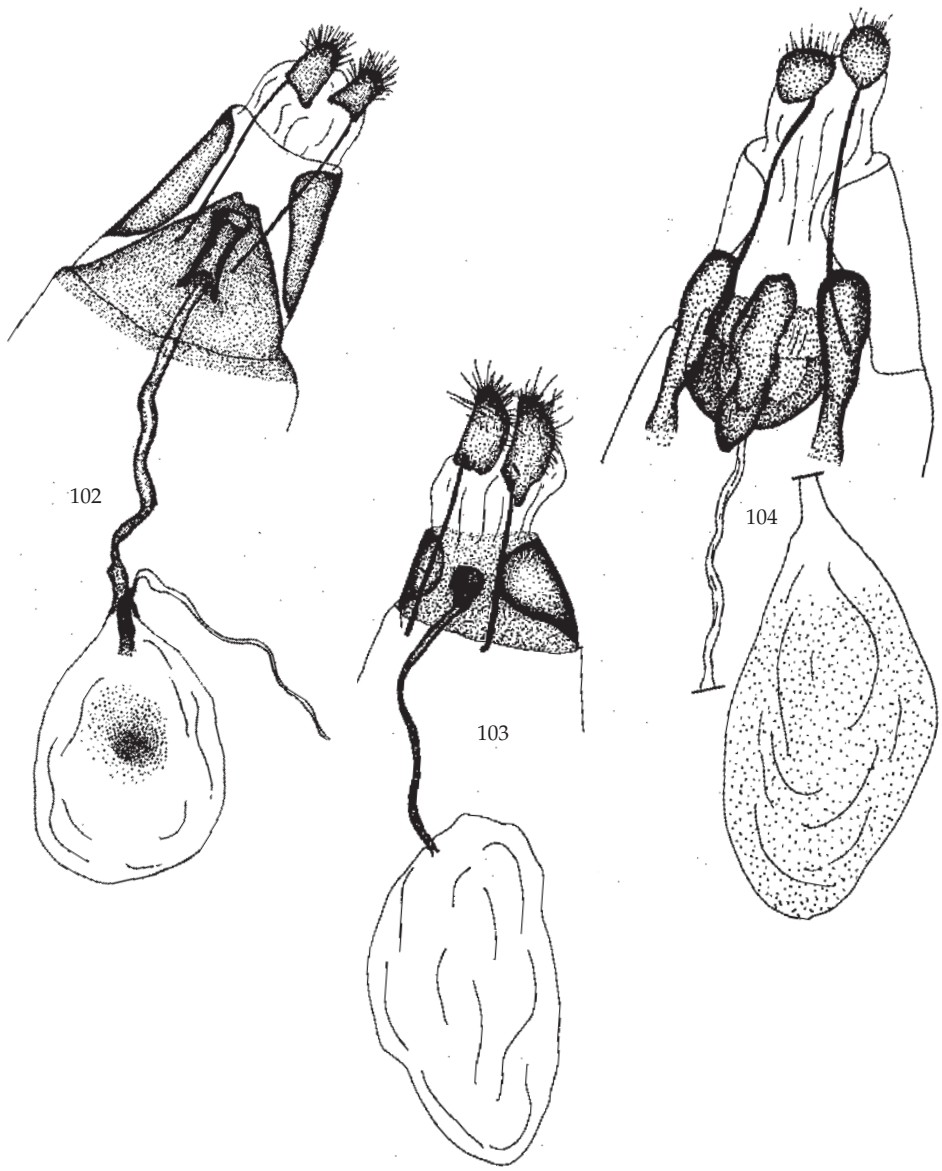

Fig. 102. *Sphenarches anisodactyla* (Walker, 1864). Tanzania, Uzungwe Mts, Mwanihana Forest, above Sanje, 1000 m, 1.viii.1981 (M. Stoltze & N. Scharff), prep. CG 4052 (ZMUC).
Fig. 103. *Exelastis pumilio* (Zeller, 1873). Virgin Islands, St Croix, 22.vii.1980 (H.K. Jensen), prep. CG 4078 (ZMUC).
Fig. 104. *Stangeia xerodes* (Meyrick, 1886). West Australia, Geraldton, 19.ix.1994 (R. v. Randen), prep. CG 2782 (CG).

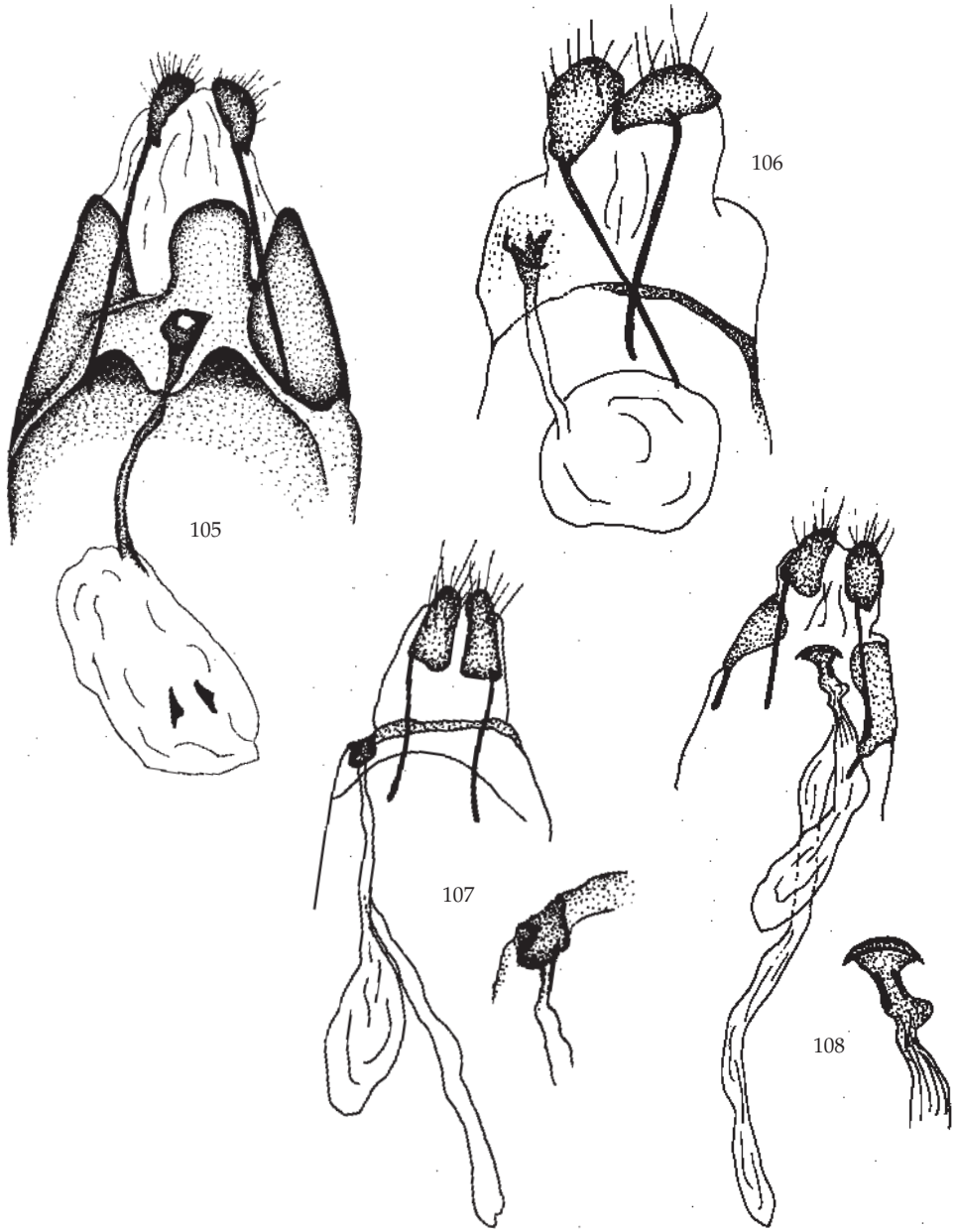

Fig. 105. *Megalorhipida leucodactyla* (Fabricius, 1793). Argentina, Salta, Los Toldos, 17-21.ii.1960 (R. Golbach), prep. CG 4112 (ZMUC).
Fig. 106. *H. tariensis* spec. nov. Paratype. Papua New Guinea, Southern Highlands, Tari, 9000', 8.xi.1984 (D. Agassiz), gent. CG 4607 (ZMUC).
Fig. 107. *H. agassizi* spec. nov. Holotype. Papua New Guinea, Enga, Wabag, Kaiap, 9000', 9.xi.1984 (D. Agassiz), gent. CG 4609 (ZMUC).
Fig. 108. *H. kaiapensis* spec. nov. Holotype. Papua New Guinea, Enga, Wabag, Kaiap, 9000', 9.xi.1984 (D. Agassiz), gent. CG 4610 (ZMUC).

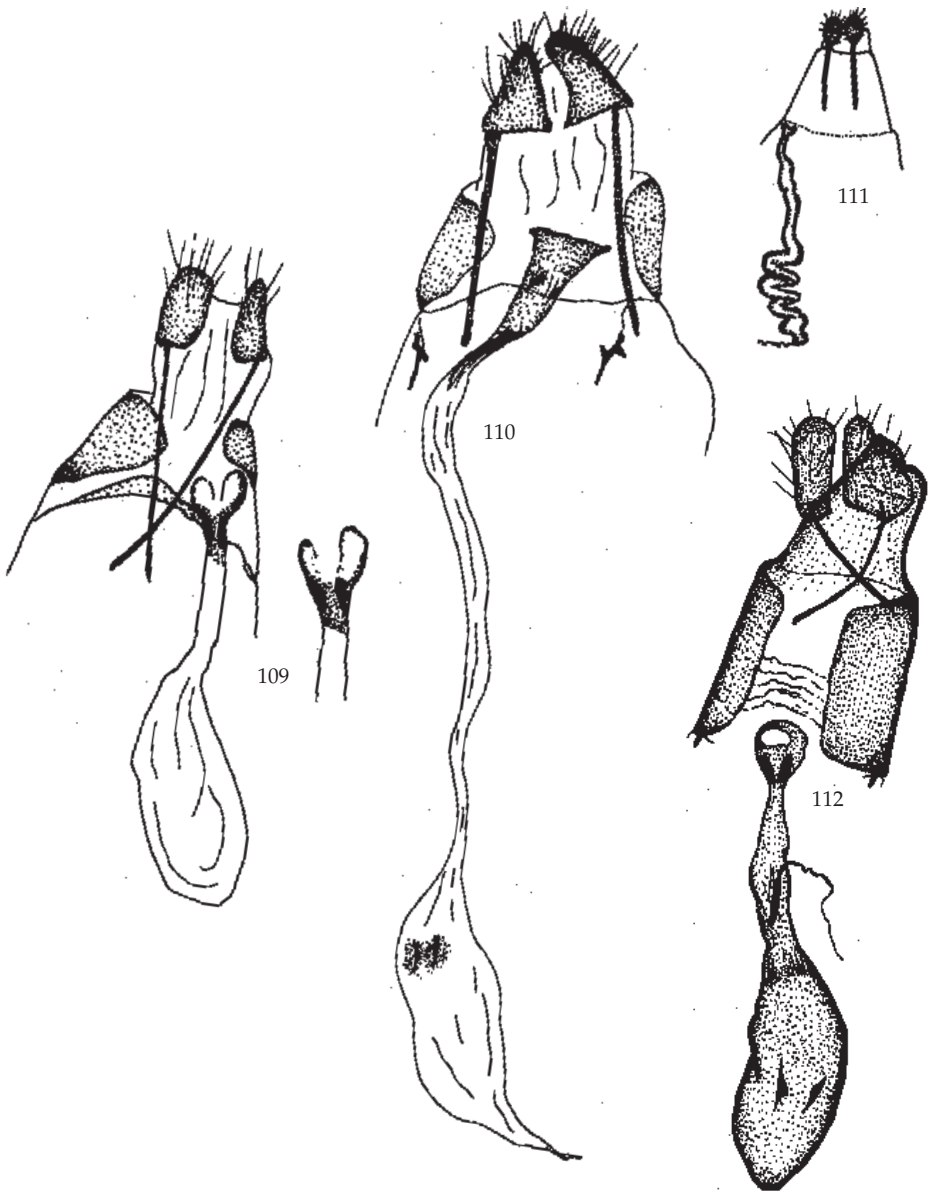

Fig. 109. *H. carphodactoides* spec. nov. Holotype. Papua New Guinea, Southern Highlands, Tari, 5000', 19.xi.1984 (D. Agassiz), gent. CG 4611 (ZMUC).
Fig. 110. *H. probatus* (Meyrick, 1938). Holotype. Papua New Guinea, Mt Tafa, 8500', iii.1934 (L.E. Cheesman), gent. BM 21323 (BMNH).
Fig. 111. *Adaina microdactyla* (Hübner, [1813]). Indonesia, Sulawesi, Toraja district, 1-5.vi.1985 (G. Gielis), prep. CG 2221 (CG).
Fig. 112. *Pterophorus leucadactylus* (Walker, 1864). Indonesia, (Marewas umbellata), xii.1913 (Diakonoff), prep. CG 3065 (RMNH).

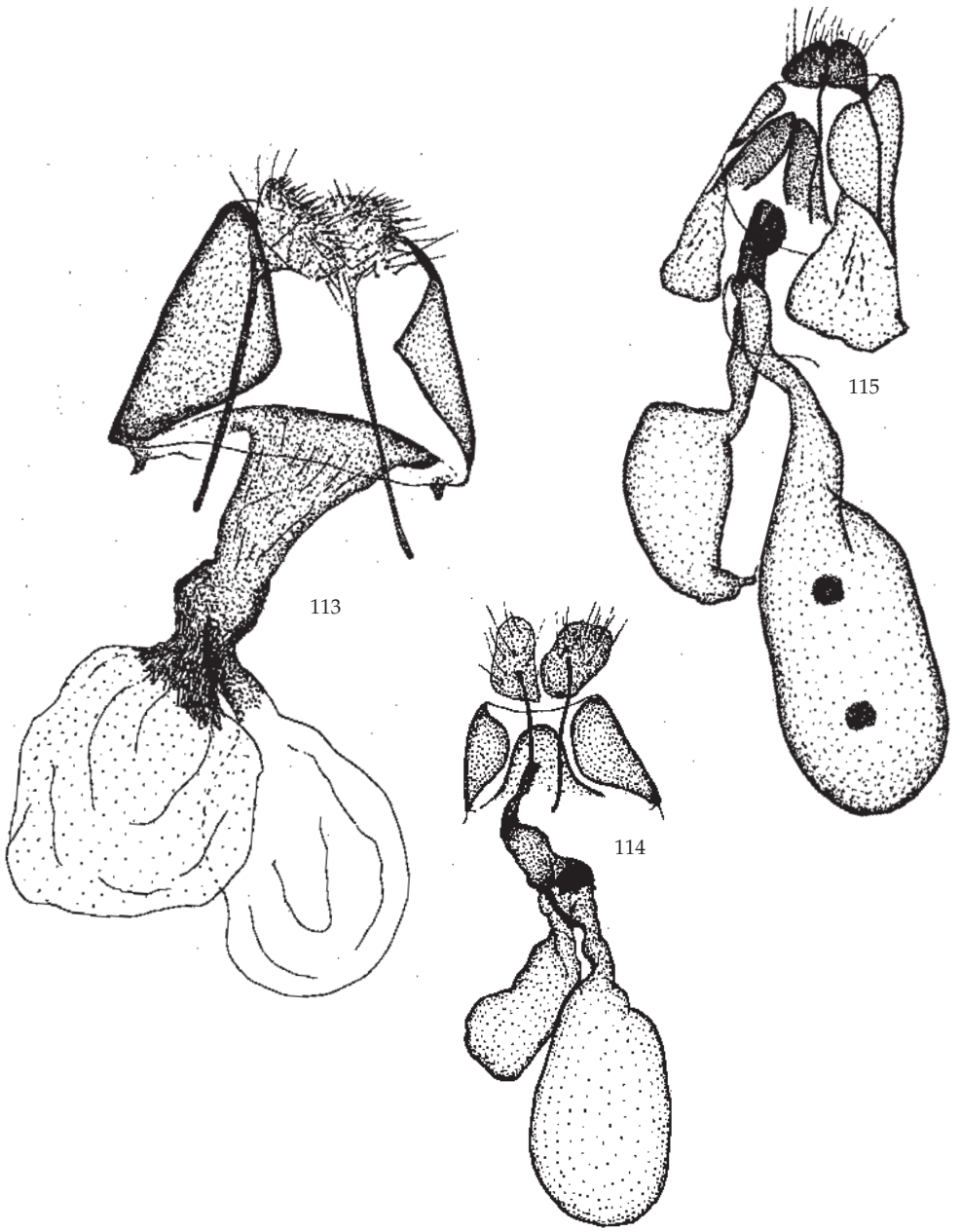

Fig. 113. *P. niveus* (Snellen, 1903). Indonesia, Sulawesi, Rantapao, 15.iv.1983 (G. Gielis), prep. GG 1555 (CG).
Fig. 114. *P. aliubasignum* Gielis, 2000. Holotype. Indonesia, Irian Jaya, Sorong, 8.vii-14.viii.1948 (M.A. Lieftinck), gent. CG 3090 (RMNH).
Fig. 115. *P. lacteipennis* (Walker, 1864). Indonesia, SE Borneo, Ampah, 0-20 m, iv-v.1948 (L.S. Liong), prep. CG 3091 (RMNH).

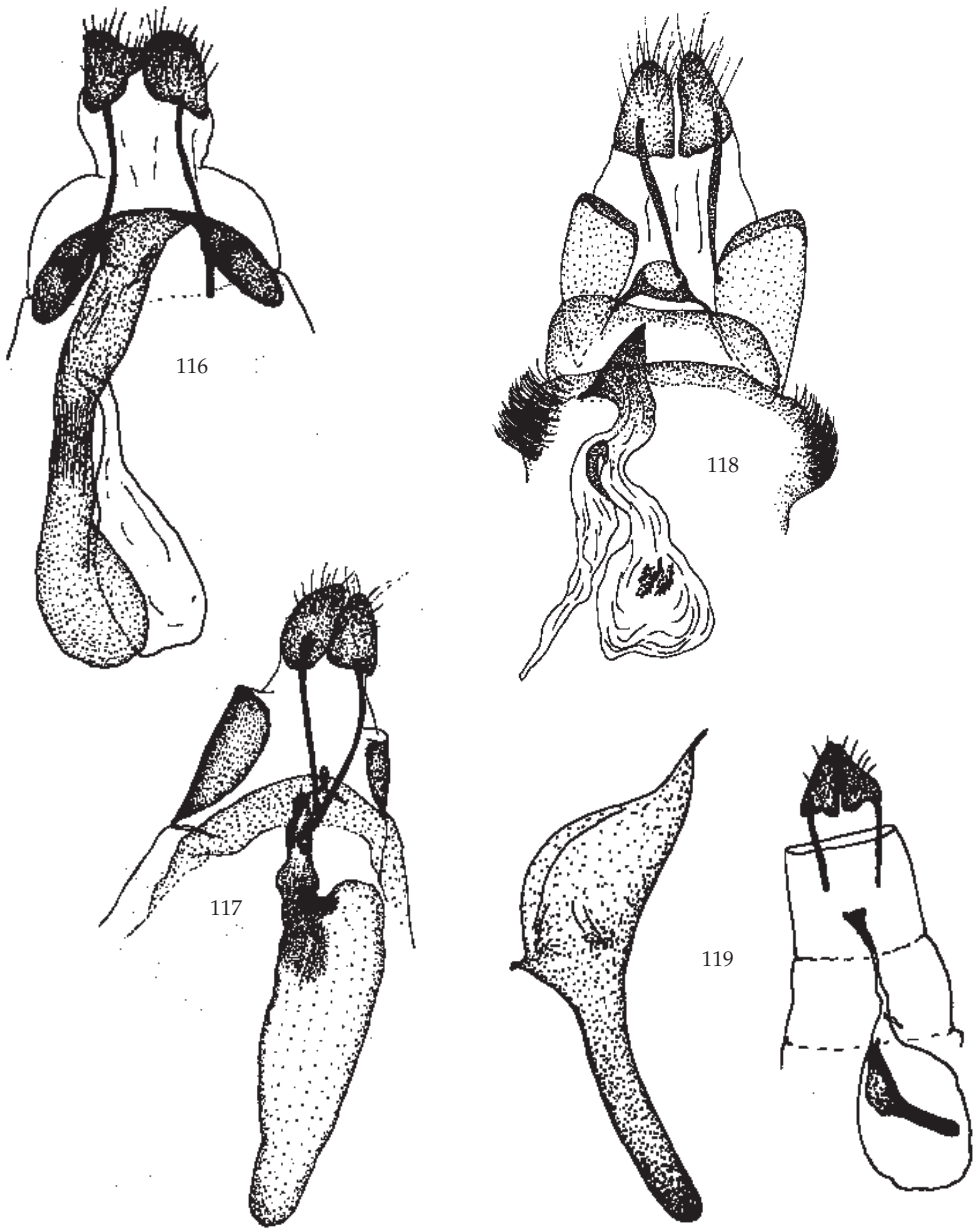

Fig. 116. *P. ebbei* Arenberger, 1989. Sri Lanka, Uva, Haputale, 1700 m, 17.viii.1908 (T.B. Fletcher), prep. BM 18636 (BMNH).
Fig. 117. *P. albidus* (Zeller, 1852). Tanzania, East Usambara, Amani, 1000 m, 25.i.1977 (H. Enghof, a.o.), prep. CG 4018 (ZMUC).
Fig. 118. *Cosmoclostis lamprosema* Fletcher, 1947. Paratype. Solomon Islands, New Ireland, xi.1923, gent. BM 20496 (BMNH).
Fig. 119. *Cosmoclostis pesseuta* Meyrick, 1906. Indonesia, Java, Buitenzorg, v.1948, prep. CG 3092 (RMNH).